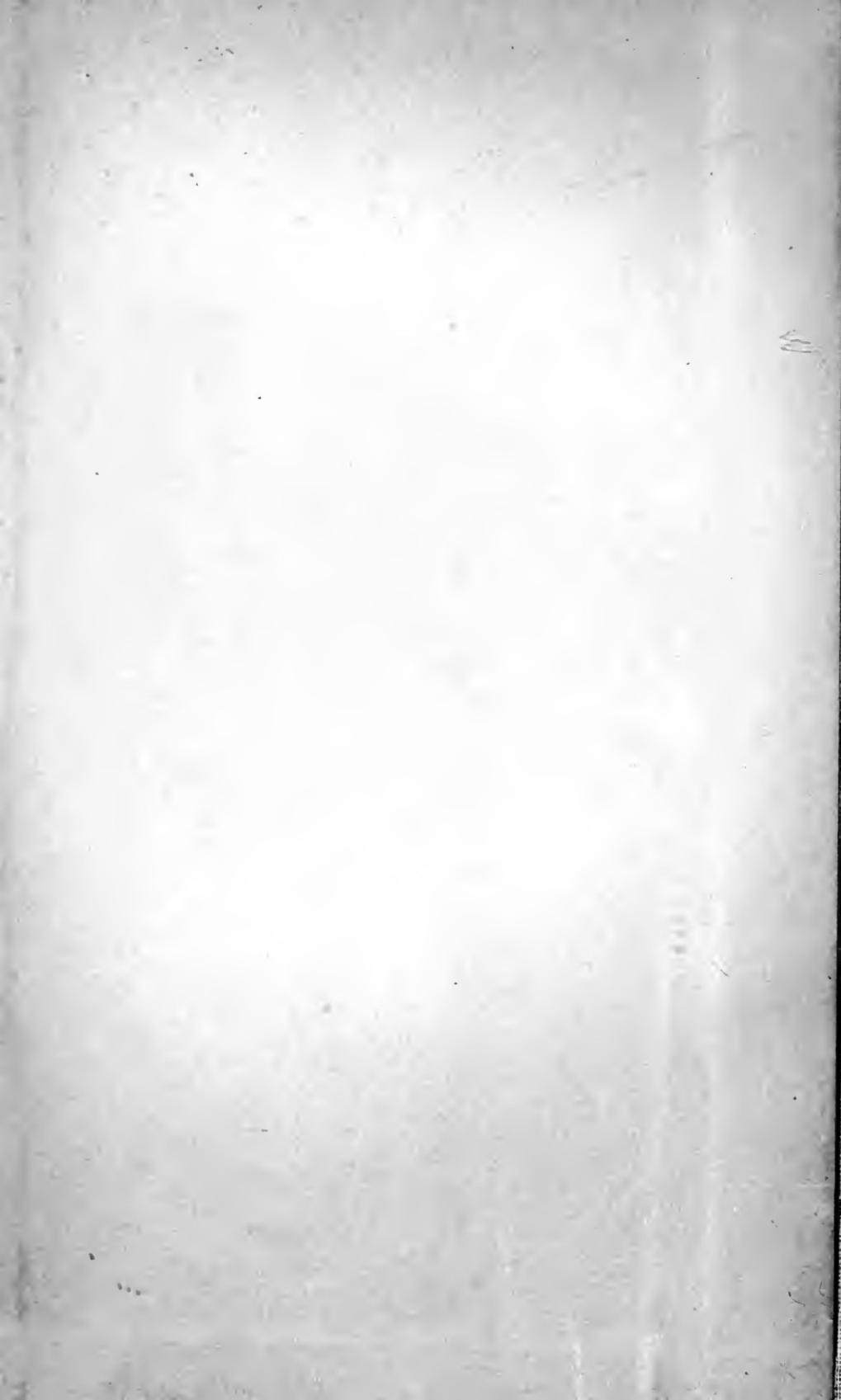
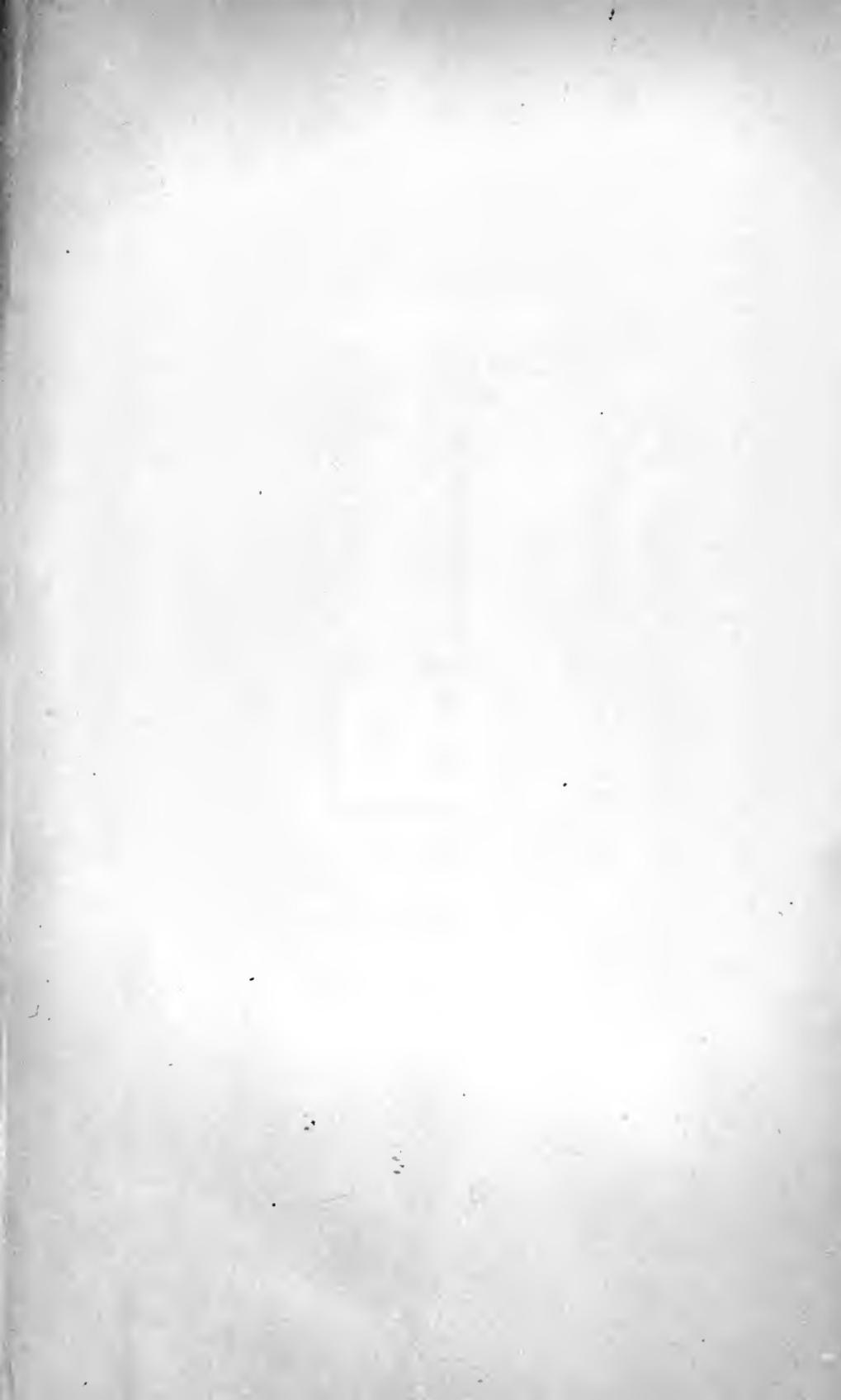


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PROCEEDINGS

AND

COLLECTIONS

OF THE

WYOMING HISTORICAL AND GEOLOGICAL SOCIETY.



VOL. II.

136308
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WILKES-BARRÉ, PA.
PRINTED FOR THE SOCIETY.
1886.

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PROCEEDINGS AND COLLECTIONS
—OF THE—
Wyoming Historical and Geological Society.

VOL. II.

WILKES-BARRÉ, PA.

Part. 1.

CHARTER.

*To the Honorable the Judges of the Court of Common Pleas
of Luzerne County :*

The petition of the Wyoming Historical and Geological Society respectfully represents: That they are an association duly incorporated under the laws of the commonwealth of Pennsylvania, by the decree of this Court duly made on the 10th day of May, A. D. 1858, for literary and scientific purposes, such as are embraced within corporations of the first class specified in section second of an act of the General Assembly of this commonwealth entitled "An Act to provide for the incorporation and regulation of certain corporations," approved on the 29th day of April, A. D. 1874. That in pursuance of the provisions of the said act of the General Assembly, they are desirous of improving, amending and altering the articles and conditions of their charter so as to come under the provisions of and have the powers and immunities of the said act of General Assembly and its supplements, the same as though they were originally incorporated thereunder, and to abolish, abandon, and be forever released from all and singular, the articles and conditions of their present charter which in any manner do or may conflict or interfere

with the same, or with the certificate and provisions herein-after set forth; and at a meeting of said corporation, duly convened, the following improvements, amendments and alterations of the said charter were duly adopted:

The first section or article of said old charter shall be left as it now stands, so as to read as follows, to wit:

I. The name of this corporation shall be the Wyoming Historical and Geological Society.

The second section or article of said old charter shall be amended and altered so as to read as follows, to wit:

II. The purposes for which it is chartered are literary, scientific and historical, for the collection and maintenance of a library and museum, and especially for the collection and preservation of relics and records connected with, and calculated to elucidate, the history of Wyoming Valley and its vicinity.

And to strike out and annul all the other sections of said old charter, and amend and alter the same so as to read as follows, to wit:

III. The place where the business of said association is to be transacted is Wilkes-Barré, Pennsylvania.

IV. The term for which it is to exist is perpetual.

V. The corporation has no capital stock. The membership thereof shall be composed of the present members, and of such other persons as may, from time to time, be admitted by vote, in such manner and upon such requirements as may be prescribed by the by-laws. The said corporation shall nevertheless have power to exclude, expel or suspend members for such just and legal causes, and in such legal manner as may be ordained and directed by the by-laws.

VI. The oversight and management of the said corporation shall be vested in a board of five Trustees, and such officers of the corporation as may, under the by-laws, be Trustees *ex-officio*. The said five Trustees shall be elected annually by members of the corporation on such day and at

such place as may be fixed by the by-laws. The said Trustees shall hold their offices until the next annual election, and until their successors are legally elected, subject, nevertheless, to the power of amotion of any Trustee from the said office by the said corporation for legal cause and upon such proper and legal notice and hearing as may be provided by the by-laws. The names and residences of those chosen Trustees, who shall hold office until the next annual election of Trustees, and until their successors are legally elected, are:

CHARLES F. INGHAM, M. D., Wilkes-Barré, Pa.

EDWARD P. DARLING, Esq., " " "

RALPH D. LACOE, Esq., Pittston, Pa.

SHELDON REYNOLDS, Esq., Wilkes-Barré, Pa.

HARRISON WRIGHT, Esq., " " "

This corporation shall be subject to the provisions of, and have all the powers, immunities and privileges granted, or intended to be granted, to corporations of the first class, by the above recited act of Assembly, approved 29th of April, A. D. 1874, and its supplements.

VII. The by-laws of this corporation shall be deemed and taken to be its laws, subordinate to the statute aforesaid, this charter, the constitution and laws of the United States, and of the commonwealth of Pennsylvania. They shall be altered and amended as provided for by one of the by-laws themselves, and shall prescribe the powers and functions of the Trustees herein, and those to be hereafter elected; the times and place of meeting of the Trustees and of the members of this corporation for the various purposes and needs of this corporation; the number of members who shall constitute a quorum at the meeting of the members of this corporation and of the Trustees; the qualifications and manner of electing members; the manner of electing officers, and the powers and duties of such officials and all other the concerns and internal management of the said corporation.

VIII. These amendments shall be deemed and taken to be subject to and under the present constitution of the commonwealth of Pennsylvania, and the act of General Assembly aforesaid, and its supplements, their purpose and object being to come within the provisions of and to possess the powers and immunities of the same.

IX. All articles and provisions of the said constitution, granted May 10th, A. D. 1858, which in anywise interfere with the foregoing provisions, are hereby annulled, superseded by and merged into this amended charter.

The foregoing report of the committee, in form of petition to the Honorable the Judges of the Court of Common Pleas of Luzerne county, passed third reading at the meeting of the Wyoming Historical and Geological Society, held December 1st, A. D. 1882, was voted upon by sections and unanimously adopted, and committee (consisting of Edward P. Darling, J. W. Hollenback and W. P. Ryman) continued with request to press to confirmation by the court.

Certified from the records of the society.



HARRISON WRIGHT, *Rec. Sec'y,
Wyoming Historical and Geological Society.*

Luzerne county, ss :

In the Common Pleas, No. 158, January term, 1883. In the matter of the amendment of the charter of the Wyoming Historical and Geological Society:

And now, the 11th day of December, A. D. 1882, the foregoing amendment and alterations of the charter of the Wyoming Historical and Geological Society having been duly presented to this Court, in order that the same might be deemed and taken to be part of the charter of said corporation, and it appearing that such amendments and alter-

ations are lawful and beneficial, and do not conflict with the requirements of the act of the General Assembly of this commonwealth, entitled "An Act to provide for the incorporation and regulation of certain corporations," approved the 29th day of April, 1874, nor with the constitution of this State, it is hereby ordered and decreed that notice thereof shall be given by publication in accordance with the statute in such case made and provided.

BY THE COURT.

And now, this 15th day of January, A. D. 1883, the within amendments, alterations and improvements having been presented to this Court, accompanied by due proof of publication of notice thereof, and no cause having been shown to the contrary, it is, on motion of W. P. Ryman, Esq., ordered and decreed that upon the recording of the same the said amendments, alterations and improvements as within set forth, shall be deemed and taken to be the charter of the said corporation.

By the Court.

CHARLES E. RICE,
President Judge.

State of Pennsylvania, }
County of Luzerne, }
ss:

Recorded in the office for recording deeds, etc., in and for said county, in Charter Book No. 1, page 527, etc.

Witness my hand and official seal, at Wilkes-Barré, this 15th day of January, 1883.



C. J. VOLKENAND,
Recorder.
per H. W. HEIDENREICH,
Deputy.

BY-LAWS.

MEMBERSHIP.

1. The membership shall consist of four classes: Resident, Corresponding, Honorary, and Life.

2. The election of members shall be by ballot, and three-fourths of all ballots shall be necessary to elect. The names of candidates for membership, together with the names of the members by whom they are proposed, shall be read at a meeting of the society, and shall not be balloted for until the next succeeding stated meeting. Candidates for resident membership shall make application in writing.

Amended as follows: All names proposed for membership shall be referred to the Board of Trustees as a committee on membership, and upon the affirmative recommendation of such committee shall be voted upon at the next succeeding stated meeting.

3. Any person not residing in the county of Luzerne may be elected a corresponding member. A resident member upon removing from the county may become a corresponding member, on giving notice of his removal and paying all arrears; a corresponding member cannot continue such after returning to the county for permanent residence, but may become a resident member.

4. Any person of recognized attainments in science or belles-lettres shall be eligible to honorary membership.

5. No member who shall be in arrears for two years shall be entitled to vote or be eligible to any office; and any failure to pay annual dues for two consecutive years, after due notice from the Treasurer, shall be considered a forfeiture of membership; and no person whose name shall be ex-

punged from the rolls of the society under the provisions of this clause shall be reinstated without the payment of his arrears, and then only at a regular meeting, by a majority vote of the members present.

6. Resident members shall pay, upon admission, the sum of five dollars, and after the next succeeding annual meeting the sum of five dollars each year. The payment of one hundred dollars at one time by a member not in arrears shall constitute him a life-member, with an exemption from all future payments.

All moneys received on account of life-memberships shall be securely invested by the Trustees in the name of the society, and shall form a fund to be called the life-membership fund, the interest only of which shall be available for the uses of the society. The Trustees shall pay to the Treasurer annually the accrued interest of said fund, or add the same to the fund as they deem for the best interests of the society. Corresponding and honorary members shall not be required to pay an entrance fee or annual dues.

7. Resignation of membership shall be made in writing, addressed to the President of the society.

OFFICERS AND COMMITTEES.

8. The officers of the society shall be a President, a board of five Trustees, four Vice Presidents, a Recording Secretary, a Corresponding Secretary, a Treasurer, a Librarian, an Assistant Librarian, five Curators, a Meteorologist, and a Historiographer. The officers shall be elected at the annual meeting, and hold office for one year, and until their successors are elected.

9. The President, or in his absence, the highest officer present, shall preside at all meetings of the society, and regulate the order thereof, and when required give the casting vote. The President shall be *ex-officio* Chairman of the board of Trustees.

10. The Recording Secretary shall keep full minutes of all meetings, and have the same transcribed into a book of record. He shall have custody of the by-laws, records, and all papers appertaining to his office. He shall give notice of the time and place of all meetings.

11. The Corresponding Secretary shall conduct all the correspondence, and preserve on file all communications addressed to the society. He shall keep a letter-press, or other fair copy of all letters written by him, and read at each meeting such part of the correspondence as the President may direct. He shall notify officers and members of their election, and communicate all special votes to parties interested therein, and acknowledge all gifts to the several departments.

12. The Treasurer shall collect the annual dues of the members, and other income of the society, and deposit the money in one of the Wilkes-Barré banks to the credit of the society, subject to the check of the Treasurer. He shall pay under proper vouchers all the ordinary expenses of the society; and shall, at the annual meeting, present a statement of the receipts and expenditures during the year, together with a full report of the financial condition of the society. He shall give a bond for the faithful performance of his duties in a sum to be fixed by the Trustees, and by them held as security.

13. The Librarian shall preserve and arrange in proper order all books, pamphlets, documents, manuscripts and other papers of the society, and keep a catalogue of the same, numbering them with the proper numbers of both the general and special catalogues. He shall keep a record of all gifts and bequests to this department, with the date and name of the donor.

14. There shall be one Curator for each of the following departments: Archæology and History; Numismatics; Geology and Minerology; Paleontology; and Conchology.

Each Curator shall have the charge and management of the special department assigned to his care, and shall arrange, classify and catalogue the same in such manner as shall be approved by the Cabinet Committee. He shall keep a record of all gifts to his department, together with the date and name of donor.

15. The Trustees shall have entire charge of the business management of the affairs of the society. They shall examine and audit the accounts of the Treasurer, and authorize and direct the investment of the surplus funds. They shall make such appropriations from the funds for the library, cabinets, and other purposes as in their judgment shall seem necessary. They shall have the power to remit the dues of members in cases when circumstances render it proper.

16. The Librarian, Assistant Librarian, and the five Curators shall constitute a Cabinet Committee who shall have supervisory care of the library and collections. They shall direct the manner of expenditure of the moneys appropriated by the Trustees for the maintenance and increase of the library and cabinets, and provide suitable cases, fixtures and supplies, and have authority to make exchanges. They shall make a detailed report at the annual meeting showing the condition of the departments under their care.

17. A Publishing Committee shall be appointed by the President, consisting of three members, to hold office one year, who shall prepare for publication and superintend the printing and distribution of all papers and documents which by the society are ordered to be printed.

18. The Meteorologist shall keep a record of the temperature, barometric pressure, direction and velocity of winds, degree of cloudiness, and amount of rainfall by daily observations, and as nearly as practicable at the hours adopted by the U. S. Signal Service department, and submit reports thereof at each stated meeting.

19. The Historiographer shall collate and keep a record

of such current events of local or public interest as he may deem worthy of preservation; and prepare notices of members deceased during his term of office.

MISCELLANEOUS.

20. The annual meeting shall be held on the eleventh day of February, at eleven o'clock A. M.; in case, however, the same falls on Sunday, the meeting shall be held on the preceding Saturday. Stated meetings thereafter shall be held on the second Friday of May, September, and December, at eight o'clock in the evening, at the hall of the society. The President may call special meetings whenever he shall deem it necessary. Seven members shall constitute a quorum at any meeting.

21. The Trustees shall hold regular meetings four times each year, to wit: on the Monday evenings preceding the stated meetings of the society; also adjourned and special meetings as may be necessary. A majority of the Trustees shall be a quorum.

22. All reports of committees must be in writing and addressed to the President, and shall be recorded by the Recording Secretary.

23. All books, pamphlets, and manuscripts shall be regularly numbered and marked with the name "Wyoming Historical and Geological Society," and bear the proper numbers of the general and special catalogues.

24. All gifts to the library or cabinet shall, when practicable, have the name of the donor attached thereto.

25. No article belonging to the society shall be taken from the rooms without permission of the Cabinet Committee.

26. No person shall have the right to use any manuscript of the society in the preparation of any paper or essay unless such paper or essay shall be read before the society and become its property.

27. The society shall select, at the annual meeting, one of the members to deliver an address at the succeeding annual meeting.

28. If any member shall violate the laws and regulations of the society with intent to injure its interests, written charges may be preferred against such member at any meeting, and, after reasonable notice and hearing, the society may, at the next stated meeting, by a three-fourths affirmative vote of all members present, fine, suspend or expel the offending member.

29. The by-laws may be amended at a stated meeting by a vote of two-thirds of the members present; provided the proposed amendments shall have been read at the stated meeting next preceding.

30. Cushing's Manual shall be deemed and taken as part of the law of this society, subject, however, to its charter and by-laws.

ORDER OF BUSINESS AT ALL MEETINGS OTHER THAN ANNUAL
MEETINGS.

- I. The Recording Secretary shall enter on the minutes the names of members present.
- II. Minutes of last stated, and of any subsequent special, meeting read for correction and approval.
- III. Acknowledgment of contributions.
- IV. Reading of correspondence.
- V. Nominations for membership.
- VI. Balloting for candidates for membership.
- VII. Reports of officers and committees.
- VIII. Deferred business.
- IX. New business.
- X. Addresses.
- XI. Adjournment.

ORDER OF BUSINESS AT ANNUAL MEETINGS.

- I. Meeting opened with prayer.
- II. Recording names of members present.
- III. Election of officers for ensuing year.
- IV. Reports of officers and committees.
- V. Notices of death of members read.
- VI. Nominations for membership, and balloting for candidates.
- VII. Resolutions, and miscellaneous business.
- VIII. Addresses.
- IX. Adjournment.

ROLL OF MEMBERSHIP.

* Denotes that member is deceased.

HONORARY.

NAMES.	DATE OF ELECTION.
*Prof. Alexander D. Bache,	1859
Prof. James C. Booth,	1859
*Rt. Rev. Samuel Bowman, D. D.,	1868
Hon. Charles R. Buckalew,	1859
Hon. Simon Cameron,	1859
Chief Engineer John B. Carpenter, U. S. N.,	1861
*Hon. Charles S. Coxe,	1862
Lyman C. Draper, LL. D.,	1883
William H. Egle, M. D.,	1882
*Prof. Arnold Guyot,	1859
Charles J. Hoadly,	1859
*Charles Ingham,	1866
*Hon. William Jessup,	1859
Rev. Henry H. Jessup, D. D.,	1859
John Jordan, jr.,	1862
*Hon. Joel Jones,	1868
Prof. Isaac Lea, LL. D.,	1859
Prof. Joseph Leidy, M. D.,	1859
Prof. Leo Lesquereux,	1878
Hon. John Blair Linn,	1882
*Rev. Reuben Lowrie,	1859
*Hon. Garrick Mallery,	1858
*Lieut. M. F. Maury, U. S. N.,	1859
*Hon. Stewart Pearce,	1882
*Hon. Octavius Pickering,	1862
Prof. G. C. Swallow, LL. D.,	1860

*William S. Vaux,	1859
*Hon. C. L. Ward,	1859
*Hon. George W. Woodward,	1873
*J. J. Wright, M. D.,	1860

CORRESPONDING.

NAMES.	DATE OF ELECTION.
Charles A. Ashburner,	1883
E. B. Ayers,	1874
Theron Barnum,	1859
E. M. Barton,	1883
*Rear Admiral J. C. Beaumont, U. S. N.,	1858
T. V. Braidwood,	1866
R. A. Brock,	1883
George Butler,	1868
Pierce Butler,	1884
Stephen Callender,	1859
Gen. John S. Clark,	1884
O. W. Collet,	1883
*Chester A. Colt,	1858
Henry Colt,	1858
Prof. Henry Coppee, LL. D.,	1883
Martin Coryell,	1864
Samuel L. Cutter,	1861
John H. Dager,	1883
Gen. W. W. H. Davis,	1884
*Thomas Dickson,	1859
Rev. S. B. Dod,	1865
Edward Dolph,	1858
Silas H. Durand,	1862
D. S. Durrie,	1883
George M. Elwood,	1861
*J. Gillingham Fell,	1858
George W. Fish,	1884
William Frothingham,	1859
Jay Gould,	1860

P. C. Gritman,	. . . . .	1858
*Prof. Samuel Gross, M. D.,	. . . . .	1858
*James Hamilton,	. . . . .	1873
Stephen Harding,	. . . . .	1876
*John Hartland,	. . . . .	1872
D. C. Harrington,	. . . . .	1866
A. L. Hartwell,	. . . . .	1871
C. E. Hawley,	. . . . .	1866
*S. F. Headley,	. . . . .	1859
Edward Herrick, jr.,	. . . . .	1862
Rev. A. A. Hodge, D. D.,	. . . . .	1861
James Holgate,	. . . . .	1870
H. Hollister, M. D.,	. . . . .	1858
Hon. H. M. Hoyt,	. . . . .	1858
Hon. W. H. Jessup,	. . . . .	1859
Edward Jones,	. . . . .	1862
*Hon. M. H. Jones,	. . . . .	1870
John Johnson, LL. D.,	. . . . .	1864
Rev. C. H. Kidder,	. . . . .	1874
Rev. C. R. Lane,	. . . . .	1859
Prof. Harvey B. Lane,	. . . . .	1858
*Hon. John W. Leisenring,	. . . . .	1862
S. T. Lippencott,	. . . . .	1858
Dr. J. R. Loomis,	. . . . .	1859
Col. Garrick Mallory,	. . . . .	1858
Hon. John Maxwell,	. . . . .	1859
*Rev. George D. Miles,	. . . . .	1858
Edward Miller,	. . . . .	1860
Madison Mills, M. D., U. S. A.	. . . . .	1860
J. M. McMinn,	. . . . .	1860
Millard P. Murray,	. . . . .	1882
P. M. Osterhout,	. . . . .	1881
Rev. John J. Pearce,	. . . . .	1858
John Peters,	. . . . .	1858
Henry Phillips, Ph. D.,	. . . . .	1883

ROLL OF MEMBERSHIP.

James H. Phinney,	.	1859
William M. Piatt,	.	1858
Col. V. E. Piollet,	.	1883
John M. Poor,	.	1859
Bruce Price,	.	1874
Hon. Lewis Pughe,	.	1860
S. R. Reading,	.	1858
*Prof. John Richards,	.	1858
J. L. Richardson,	.	1859
J. C. Rhodes,	.	1861
H. B. Robinson,	.	1858
J. T. Rothrock, M. D.,	.	1870
H. N. Rust, M. D.,	.	1859
Prof. B. F. Shumart,	.	1860
W. H. Starr,	.	1883
Col. William L. Stone,	.	1884
John H. Sutphin,	.	1871
Thomas Sweet, M. D.,	.	1859
S. L. Thurlow,	.	1862
Ira Tripp,	.	1859
Jacob Waelder,	.	1860
*J. B. Wakeman,	.	1870
Abram Waltham,	.	1871
H. C. Wilson,	.	1883
Dilton Yarrington,	.	1859

LIFE.

NAME.	DATE OF ELECTION.
William L. Conyngham,	1884
Charles F. Ingham, M. D.,	1858
F. V. Rockafellow,	1884
J. H. Swoyer,	1884

RESIDENT.

NAMES.	DATE OF ELECTION.
Frederick Ahlborn,	1881
Miss Emily I. Alexander,	1881
*William H. Alexander,	1858
*James Archbald,	1858
*Horace Armstrong,	1872
*Thomas F. Atherton,	1858
Thomas H. Atherton,	1881
E. N. Banks, M. D.,	1882
*B. A. Barnes,	1859
Robert Baur,	1858
George R. Bedford,	1866
*Charles Bennet,	1858
*Major D. S. Bennet,	1880
*John Bennet,	1858
Mrs. Priscilla Lee Bennett,	1882
*Hon. Ziba Bennett,	1858
Arnold Bertels,	1871
Joseph K. Bogert,	1882
J. H. Bowden,	1881
*Joel Bowkley,	1858
*Col. A. H. Bowman, U. S. A.,	1858
*William Brisbane, M. D.,	1858
Thomas Brodrick,	1860
S. L. Brown,	1882
*George H. Butler,	1858
George H. Butler,	1884
*H. Seymour Butler,	1858
*John L. Butler,	1858
*Lord Butler,	1858
E. H. Chase,	1859
*James Clarkson,	1858
*E. B. Collings,	1859
Col. C. M. Conyngham,	1862

*Col. J. B. Conyngham,	1858
*Hon. J. N. Conyngham,	1858
J. M. Courtright,	1859
*Captain G. Converse,	1860
Hon. Eckley B. Coxe,	1866
Hon. E. L. Dana,	1858
*Sylvester Dana,	1858
E. P. Darling,	1870
J. Vaughan Darling,	1881
L. C. Darte,	1884
H. C. Davis,	1883
Captain James P. Dennis,	1858
*W. F. Dennis, M. D.,	1858
*Hon. Charles Denison,	1858
*Col. Hiram Denison,	1858
A. F. Derr,	1881
H. H. Derr,	1870
Thompson Derr,	1866
Col. Charles Dorrance,	1858
*Rev. John Dorrance, D. D.,	1858
*C. B. Drake,	1858
*Col. A. H. Emley,	1860
D. H. Frantz,	1882
Hon. Herman C. Fry,	1870
James E. Gay,	1883
*Hon. Henderson Gaylord,	1858
*E. S. Goodrich,	1858
*Alexander Gray,	1859
H. S. Green,	1883
G. W. Guthrie, M. D.,	1870
*F. M. Harkness,	1870
*Col. E. B. Harvey,	1858
H. H. Harvey,	1872
O. F. Harvey, M. D.,	1882
O. J. Harvey,	1883

William J. Harvey,	1882
Rev. H. E. Hayden,	1881
*W. N. G. Hibler,	1859
J. H. Hildreth,	1882
*O. B. Hillard,	1858
Oliver C. Hillard,	1881
*George M. Hollenback,	1858
John W. Hollenback,	1868
*John Howarth,	1858
*N. G. Howe,	1870
Andrew Hunlock,	1870
*Rev. T. P. Hunt,	1858
E. V. Jackson,	1879
Rev. H. L. Jones,	1881
*Willard Jones,	1870
C. Ben Johnson,	1883
F. C. Johnson,	1872
George Johnson,	1859
*Hon. W. W. Ketcham,	1868
C. P. Kidder,	1871
George B. Kulp,	1881
R. D. Lacoe,	1882
Fred. Landmesser,	1867
L. B. Landmesser,	1882
*Charles A. Lane,	1858
*A. C. Laning,	1858
John Laning,	1858
Woodward Leavenworth,	1882
*Washington Lee, Jr.,	1858
*Arnold C. Lewis,	1859
G. Mortimer Lewis,	1880
E. S. Loop,	1859
George Loveland,	1870
*V. L. Maxwell,	1858
E. R. Mayer, M. D.,	1858

Mrs. Katherine McCartney,	1882
Mrs. A. B. McClintonck,	1881
A. H. McClintonck,	1873
A. T. McClintonck, LL. D.,	1858
Miss Jean H. McClintonck,	1881
W. S. McLean,	1870
Fred. Mercur,	1884
*William H. Merritt,	1864
G. M. Miller.	1871
William M. Miller,	1882
*Hon. Charles Miner,	1858
Hon. Charles A. Miner,	1864
*E. Bowman Miner, M. D.,	1858
Mrs. Eliza R. Miner,	1881
*Thomas W. Miner, M. D.,	1858
William P. Miner,	1858
*David Mordicai,	1860
Charles Morgan,	1858
*Capt. A. Morse,	1867
*Robert Morton,	1868
*A. H. Mulford,	1871
J. A. Murphy, M. D.,	1870
Abram Nesbitt,	1882
*G. B. Nicholson,	1858
James M. Norris,	1884
*Thomas Oldershaw,	1858
*Hon. Isaac S. Osterhout,	1858
L. C. Paine,	1881
Charles Parrish,	1858
George H. Parrish,	1883
Mrs. Mary C. Parrish,	1881
John H. Parrott,	1883
Capt. Calvin Parsons,	1858
Maj. Oliver A. Parsons,	1868
*Sanford E. Parsons,	1870

W. S. Parsons,	1862
Hon. Hubbard B. Payne,	1866
*Rev. George Peck, D. D.,	1858
*Hon. Henry Pettebone,	1858
Payne Pettebone,	1858
John C. Phelps,	1859
*Capt. C. C. Plotz,	1858
G. H. R. Plumb,	1882
*William S. Reddin,	1858
George N. Reichard,	1859
John Reichard, Jr.,	1873
A. H. Reynolds,	1871
Benjamin Reynolds,	1879
Col. G. M. Reynolds,	1883
Sheldon Reynolds,	1874
*Hon. William C. Reynolds,	1858
*Mrs. Ruth T. Ross,	1881
*Gen. William S. Ross,	1858
C. M. Rouse,	1883
H. S. Rutter,	1881
Theo. F. Ryman,	1882
William P. Ryman,	1881
*Hon. George W. Scranton,	1858
C. H. Sharer,	1882
Richard Sharpe,	1883
Richard Sharpe, Jr.,	1881
Byron Shoemaker,	1883
*Hon. C. D. Shoemaker,	1858
William M. Shoemaker,	1883
*Jonathan J. Slocum,	1858
*Cyrenus M. Smith,	1858
Douglass Smith,	1866
*George T. Smith,	1870
*John Smith, M. D.,	1858
Irving A. Stearns,	1870

A. A. Sterling,	1882
William Stoddart,	1881
C. H. Sturdevant,	1873
*Gen. E. W. Sturdevant,	1858
*Maj. John Sturdevant,	1858
W. H. Sturdevant,	1858
S. C. Struthers,	1882
*Jesse Thomas,	1871
*William Tompkins,	1868
Frank Turner,	1881
*Hon. S. G. Turner,	1868
Stephen B. Vaughn,	1882
*Calvin Wadhams,	1858
Mrs. Esther T. Wadhams,	1881
*Moses Wadhams,	1859
*Samuel Wadhams,	1859
Samuel F. Wadhams,	1880
Edward Welles,	1882
Nat. Wolfe,	1882
John G. Wood,	1882
Hon. Stanley Woodward,	1858
Mrs. Emily L. Wright,	1881
George R. Wright,	1882
Harrison Wright,	1872
*Hon. H. B. Wright,	1858
John Wroth,	1882
E. B. Yordy,	1882

PROCEEDINGS.

Stated Meeting, March 2d, 1883.

Present, seven members.

President Ingham in the chair.

Contributions to the library and cabinets were formally acknowledged.

The meteorological observations for the month of February were read by the Corresponding Secretary.

The Recording Secretary stated that the paper by Mr. Maffet, on the North Branch Canal, which had been announced for the meeting had not come to hand.

Stated Meeting, April 6th, 1883.

Present, ten members.

President Ingham in the chair.

Contributions to the library and cabinets were formally acknowledged.

The Committee on the Revision of the By-Laws submitted a written report which passed first reading, and was, on motion, placed for second reading.

The meteorological observations for the month of March were read by the Corresponding Secretary.

Ralph D. Lacoë, Esq., read a carefully prepared check-list of the polæozoic fossil insects of America* which was referred to the Publishing Committee, and a vote of thanks was tendered to Mr. Lacoë.

Dr. Harrison Wright, read a translation of an essay de-

*Since published as Publication No. 5.

livered by M. L. Delisle, February 22d, 1883, before the Academy of Inscriptions, on the oldest manuscripts of the Libri collection in the library at Ashburnham Place, for which he received a vote of thanks.

Stated Meeting, May 4th, 1883.

Present, eleven members.

President Ingham in the chair.

Contributions were formally acknowledged.

Col. G. M. Reynolds, Edward H. Chase, William M. Shoemaker, George H. Parrish, H. S. Green, and E. Robinson were elected members.

The Corresponding Secretary read the meteorological report for the month of April.

On motion the second reading of the new by-laws was postponed to the June meeting.

The Special Archæological Committee for the Athens locality made written report, * which was on motion received and referred to the Publishing Committee. The committee received the thanks of the society.

On motion a vote of thanks was passed to Mr. Millard P. Murray, for the fine contribution made to the acrhcæological cabinet, for the kindness in allowing the committee to make excavations on his lands, and for the many courtesies shown to the committee.

A letter was then read, inviting the society to take part in the celebration at Sayre, at the planting of a memorial tree to Robert A. Packer. On the question whether this society should appoint a committee to attend the exercises being put, it was negatived; but upon the statement that Rev. Mr. Hayden expected to be at Sayre during the celebration, he was directed to represent the society.

**Infra.*

Stated Meeting, June 1st, 1883.

Present, twelve members.

Vice President L. C. Paine in the chair.

Contributions were formally acknowledged.

The report of the Committee on the Revision of the By-Laws was then read for the second and last time, and upon motion was adopted.

The Publishing Committee was directed to publish the constitution and by-laws together with a list of members and date of election.

The Corresponding Secretary read the meteorological report for the month of May.

Quarterly Meeting, September 14th, 1883.

The first quarterly meeting under the amended charter and revised by-laws. Present, nineteen members.

Vice President Rev. H. L. Jones in the chair.

The usual acknowledgement of contributions to the library and cabinets was made.

The correspondence was read. A letter from the Superintendent of Public Printing, (Pennsylvania), relative to distribution of the publications of the state, under Act of Assembly, 1883, saying the name of this society had been entered the first on the list of recipients. One from Prof. E. W. Claypole concerning the carboniferous shells sent by the society to the Second Geological Survey of Pennsylvania for classification; from Dr. Oswald Leidenstecker, seeking information concerning the German inhabitants of Luzerne county; from Hon. C. I. A. Chapman, regarding the finding of the remains of some old flint-lock guns, supposed to date back to the massacre of Wyoming; and from Hon. G. M.

Harding, giving the particulars of the finding of the so-called Indian maul, in the "hard-pan" at Bear Lake.

The following were elected corresponding members : R. A. Brock, Secretary of Virginia Historical Society; Dr. Henry Phillips, jr., Secretary of Numismatic and Antiquarian Society of Philadelphia; William H. Starr, New London County Historical Society; Millard P. Murray, Athens, Pa.; H. C. Wilson, Mount Vernon, Ohio; O. W. Collett, Secretary Missouri Historical Society; Hon. V. E. Piolett, Wysox, Pa.; C. A. Ashburner, Second Geological Survey of Pa.; D. S. Durrie, Wisconsin State Historical Society; Dr. H. Coppee, Bethlehem, Pa.; E. M. Barton, Secretary American Antiquarian Society; John H. Dager, U. S. Engineer.

The following were elected to resident membership: John H. Parrott, Wilkes-Barré; James E. Gay, C. M. Rouse, Laflin, Pa.

The following were transferred from the resident to the corresponding list of members: Martin Coryell, Lambertville, N. J.; Rev. S. B. Dod, Hoboken, N. J.; P. M. Osterhout, Tunkhannock, Pa.; S. R. Reading, Bruce Price, New York, N. Y.; John Reichard, jr., Denver, Colorado; Dr. J. T. Rothrock, Philadelphia, Pa.; S. L. Thurlow, Newport, R. I.

George B. Kulp, Esq., read a necrological note * on Calvin Wadham, Esq., late an officer of this society. Mr. Kulp received a vote of thanks.

A motion that each newly elected member should file with the Secretary certain autobiographic notes was referred to the Executive Committee.

A well marked specimen of the rare carboniferous myriapod *Acantherpestes Brodiei*, Scudd., from Mazon Creek, Illinois, was exhibited by Mr. Lacoe. It is interesting as being

* *Infra.*

the second specimen so far known; the first was found at Coalbrook Dale, England. In addition to its rarity, the discovery here of this European species is important, adding another example of the fauna common to both hemispheres. The specimen presents a dorso-lateral view of seven segments of the body, each segment armed with a spine of the sub-dorsal row, and plainly showing the scars and broken bases of those of the pleuro-dorsal and lateral rows. The spines shown differ from those in Scudder's figure, copied from "Brodie's Fossil Insects," as each has a basal thorn and is branched rather than forked, and quite straight in its whole length from base to tip. The basal thorns and branch-spinules are nearly equal in size, and originate on opposite sides of the spines.

A fine specimen of the beautiful fish *Macrosemius rostratus*, Ag., from the same locality, was exhibited. It is worthy of remark that in Europe this fish is not found below the Jurassic, while in this country it appears in the Carboniferous. Mr. Lacoë exhibited also a large fossil crustacean from the Catskill formation near Meshoppen, Pa. Casts of this fossil were exhibited at the late meeting of the American Association for the Advancement of Science, and named by Prof. E. W. Claypole *Dolichocephala Lacoana*, being the only crustacean from the Catskill group.

Sheldon Reynolds, Esq., read a paper on "Local Shell Heaps."* Mr. Reynolds received a vote of thanks, and the paper was referred to the Publishing Committee.

Quarterly Meeting, December 14th, 1883.

Present, eighteen members.
President Ingham in the chair.

* *Infra.*

Contributions to the library and cabinets were formally acknowledged.

Correspondence read: Letter from Hon. E. B. Coxe, relative to paper on "Early Mining of Anthracite Coal," now being prepared by Mr. Coxe; Prof. Spencer F. Baird asking the loan of Indian pottery, for use of the Bureau of Ethnology in the preparation of a work on the subject of prehistoric pottery. The letter was referred to the Corresponding Secretary.

Lyman C. Draper, of the Wisconsin Historical Society was elected an honorary member, and H. C. Davis, Richard Sharpe, Oliver A. Parsons, Oscar J. Harvey, were elected resident members.

Hon. E. B. Coxe and Hon. J. A. Sweeney received a vote of thanks for their efforts in securing the passage of the bill prepared by this society, and known as House Bill No. 96, of Session of 1883, providing for the distribution of the publications of the State among certain libraries of the Commonwealth.

The Recording Secretary read a paper, prepared by Hon. Steuben Jenkins, on the subject "The Old Pittston Fort."* Rev. H. E. Hayden read a paper entitled the "Bibliography of Wyoming Valley."* Dr. Harrison Wright read a Circular of Inquiry, relative to the old Wilkes-Barre Academy. Messrs. Jenkins, Hayden and Wright received a vote of thanks, and the several papers were referred to the Publishing Committee.

Annual Meeting, February 11th, 1884.

The meeting convened at 11 o'clock A. M.

Present, sixteen members.

President Ingham in the chair.

* *Infra.*

The Society proceeded to the election of officers for the ensuing year.

The result of the ballot showed the following gentlemen had received all the votes cast, and were thereupon declared elected:

TRUSTEES :

C. F. INGHAM,
R. D. LACOE,

E. P. DARLING,
SHELDON REYNOLDS,

HARRISON WRIGHT.

PRESIDENT :

EDMUND L. DANA.

VICE PRESIDENTS :

C. F. INGHAM,
CALVIN PARSONS,

H. L. JONES,
ECKLEY B. COXE.

RECORDING SECRETARY :

HARRISON WRIGHT.

CORRESPONDING SECRETARY :

SHELDON REYNOLDS.

TREASURER :

ANDREW F. DERR.

LIBRARIAN :

ANDREW H. MCCLINTOCK.

ASSISTANT LIBRARIAN :

G. MORTIMER LEWIS :

CURATORS :

Archæology,	SHELDON REYNOLDS.
Numismatics,	H. E. HAYDEN.
Mineralogy,	HARRISON WRIGHT.
Palæontology,	R. D. LACOE.
Conchology,	C. F. INGHAM.

Meteorologist, E. L. DANA.

Historiographer, GEORGE B. KULP.

Hon. E. B. Coxe was, by resolution, requested to prepare an address on the subject of "Early Mining of Anthracite Coal," to be delivered at the next annual meeting. Formal acknowledgment of the contributions to the library and cabinets was made.

Adjourned to 8 o'clock P. M.

ADJOURNED MEETING.

Present, seventeen members.

President Dana in the chair.

The annual reports of the Cabinet Committee and Treasurer were read, and referred.*

The death of Professor A. Guyot and Hon. Stewart Pearce, honorary members, was announced.

J. M. Norris was elected a resident member. Gen. W. W. H. Davis, Doylestown, Pa., Gen. John S. Clark, Auburn, N. Y., George W. Fish, Esq., Waverly, N. Y., were elected corresponding members.

An amendment to the by-laws was offered and passed first reading, providing that all names proposed for membership should be referred to the Trustees as a Committee on Membership, before final action by the society.

An interesting specimen of Anthracite Coal, from the Wanamie Colliery, showing what appeared to be a partial crystallization in scalenohedrons was exhibited; also, by Mr. Lacoë, drawings of a new crustacean from the carboniferous measures of Mazon Creek, Ills.; a new species of *Sigillaria*, from Cannelton, and two new species of *Archæopteris*, from the Catskill at Meshoppen, Pa., named provisionally, by Prof. Lesquereux, *Archæopteris Sphenophylafolia* and *Archæopteris macilenta*.

Mr. H. C. Davis read a paper on "The Greek in Scientific Nomenclature"; Dr. Harrison Wright read a transla-

* *Infra.*

tion of the Report of the Ashburnham Manuscripts made by M. Delisle, Administrator General of the National Library of France to the Minister of Public Instruction and Fine Arts. Messrs. Davis and Wright received a vote of thanks, and the paper of Mr. Davis was referred to the Publishing Committee.

The report of the Meteorologist for the preceding three months was read, and ordered filed.

REPORT OF THE TREASURER,

FOR YEAR ENDING FEB. 11, 1884.

To the President and Members:

The membership of the society has been increased during the past year by the election of thirteen resident members, twelve corresponding members, and one honorary member.

Eight names have been transferred from the resident to the corresponding membership list; one resident member has died.

There are one hundred and twenty-five resident members, one hundred and seven of whom pay their annual dues; the remaining eighteen are practically non-paying members. Several of the latter are members of long standing who have refused for many years to pay their indebtedness to the society. This fact has been brought to your attention several times. The sum of five hundred dollars is due the society from delinquent members.

The Treasurer in Account with Wyoming Historical and Geological Society.

<i>Dr.</i>	<i>Cr.</i>
To cash from last report . \$283 53	By rent (rooms) to Jan. 1, '84 \$320 00
" annual dues of members 460 00	" stationery 3 00
" entrance fees " 85 00	" postage 11 88
" rent of rooms (subletting) 187 40	" books and magazines . 15 00
" sale of publications . 35 30	" cost publications:
" sub'n's to binding fund . 230 00	No. 4 \$154 00
" gift from H. Wright, Esq. 154 00	" 5 49 25
" cash from other sources 5 00	" 6 85 00
	" 7 13 00
	" 8 28 90
	—————\$330 15
	" printing blanks, etc. . . 19 25
	" freight and express . . 10 88
	" gas and fuel 8 00
	" janitor's wages 11 60
	" improvements 10 00
	" repairs 28 98
	" binding books and news-
	papers 194 20
	" coins purchased . . . 13 59
	" supplies 10 35
	" bill of stenographer . . 12 00
	" " assistants in library 10 50
	" com. to collector of dues 12 00
	" sundries 18 00
	" cash on hand 400 85
\$1440 23	\$1440 23

Respectfully submitted,

SHELDON REYNOLDS, Treas.

CABINET COMMITTEE'S REPORT.

To the President and Members:

The following report of the present condition and of the progress made in the society's cabinets, since the last annual report on the subject, is respectfully submitted.

While the additions for the past year have not been as extensive as in former years, still the society can congratulate itself on having received many valuable acquisitions.

To the library several hundred bound volumes and pamphlets have been added, and the accessions have as a rule been of a very desirable description. The placing in our charge the library of the late Hon. Stewart Pearce, some four hundred bound volumes, many of which are rare local histories not represented on the shelves of our library, is a valuable addition, extending materially the student's field for research and reference. Of the manuscripts received, the most valuable for local history were two handsomely bound volumes presented by A. H. McClintock: one, the manuscript minutes of the Wilkes-Barré and Wyoming academies from 1807 to 1846, the other containing over two hundred manuscripts bearing upon the early history of these two institutions.

Forty-nine volumes of newspapers, mostly local publications, have been presented during the past year. We cannot refrain from again alluding to the great value of files of local newspapers to this institution, and from urging upon members the necessity of using their efforts towards bringing into our safe-keeping those scattered volumes of old files which are known to be still in existence and which would be of additional value by perfecting the files of our own set.

Single newspapers containing historical matter have been accumulating for a number of years. Something should be done with them, if only to make room for matter of more

general use. We would recommend the cutting out of the marked articles and their proper arrangement in albums, so that the material could be indexed and thus made easy of access. It might also be said of the broadsides belonging to the society, that for want of proper arrangement they are almost inaccessible to the student.

The society is to be congratulated on having recently received the voluntary and much needed aid of a committee of the younger members in the work of the arrangement of the library, which is to be carried out in accordance with the most recent and approved methods, and we hope before the close of the year upon which we are just entering to see this branch of the society's collections perfectly classified and thoroughly catalogued. A list of the contributions to this department, as well as to the various cabinets, accompanies this report.

The most important addition to our mineralogical cabinet was a lot of valuable tincal crystals, above twenty in number, showing many rare forms of crystalization. They were brought from Nevada and were presented to the Society by Mr. Irving A. Stearns.

To the palæontological and palæobotanical collections small additions have been made, the most important being a suite of permo-carboniferous fossils from the uppermost measures of this valley, presented by Mr. Christian H. Sharer.

To the archæological department but twenty-five articles have been added, and though the number is small the quality of the specimens is exceptionally choice. Fifteen of the specimens were taken from the Athens, Pa., locality, and were described at length in the report of the special Archæological Committee made at the May meeting. Other valuable additions to this department were the specimens found in Hanover township and presented by Mr. Henry Shiffer through the Grand Army of the Republic, and the set of Zuni pottery from Col. E. B. Beaumont, U. S. A.

The conchological department has been increased by some valuable specimens from the West Indies, Florida, and the Pacific Coast. They were given by John B. Carpenter, Mrs. L. D. Shoemaker, and Rev. H. E. Hayden, and consist of two hundred and thirty-five specimens, representing forty-four genera.

In the department of numismatics over two hundred pieces have been added, forty-three of which have been acquired by purchase and one hundred and sixty-six by presentation. Of the latter, thirty-one Greek and Roman coins were the gift of Mr. James M. Norris. Most of the specimens were desirable, as they helped to complete sets.

Your committee is divided upon the question of continuing the serial method of collecting in this department or of adopting an historical system. In following the former (while the system continues in vogue) our collection will more rapidly increase in marketable value, but as it is for preservation and future study, there would seem to be good reasons for collecting those coins of an historical and artistic nature which can now be had at a reasonable figure and which will gradually increase in value, from their own intrinsic worth, after the rarer forms of the serials have lost their fictitious values.

It has been suggested that the Society during the past year has issued too many publications. This criticism may seem to have been well founded after hearing the report of the Treasurer, but as long as it has been done without crippling the finances of the Society, your committee is of the opinion that the money has been well expended. We hope to keep pace with our sister societies; if we wish to encourage the reading of papers at our quarterly meetings, we must be prepared to make as large if not a larger outlay for publishing in the coming years. A prompt payment by the members of their annual dues will obviate any difficulty in this quarter.

Dr. Phillips, in closing his report of the proceedings of the Numismatic and Antiquarian Society of Philadelphia, for last year, said: "The life of a society lies in its publications, and a stimulus to literary effort that is now lacking would be given to our members by the knowledge that their papers, if worthy of diffusion, would be presented by us to the archæological world. There is no society in this section of the country that occupies the field in which we have labored for the last quarter of a century, yet our endeavors are not appreciated by this community, as they deserve to be, however much outside of our own city we have received a proper and merited recognition."

How well these words apply to our society and to our community can be realized when we say that while some of the leading libraries of the land are endeavoring to complete their sets of our publications, our home people are indifferent, and among our membership of over one hundred there are not as many complete sets as in the city of Boston.

We submit this evening the advance sheets of publication No. 8; this finishes the first volume of collections. Hereafter there will be perfect uniformity in our publications. The volumes of proceedings will be furnished gratis to those members only who have paid their dues; while the other publications can be had of the Secretary by purchase, at reduced figures to members.

We would say in conclusion that the annual additions to the various collections of the society make the fact each year more apparent to your committee that there is lacking an adequate number of working members to keep up the classification, cataloguing and arranging of the articles as they are presented. We entertain the hope, however, that the interest lately shown by some of the younger members may become a permanent interest and be the means of providing sufficient assistants to keep abreast of the work.

HARRISON WRIGHT, Chairman.

CONTRIBUTORS TO THE LIBRARY,

FOR YEAR ENDING FEB. 11, 1884.

NAMES AND ADDRESSES:	Bound Volumes.	Pamphlets . . .	Manuscripts . . .	Newspaper Files	Odd Newspapers, Broadsides, etc.	Maps, etc. . . .
Allen, Prof. Ezra P., Athens, Pa.		1				
Alexander, Miss C., Wilkes-Barré		1				
American Antiquarian Society		2			2	
" Museum of Natural History		2				
" Numismatic and Arch. Soc'y.		1				
" Philosophical Society	1	1				
Ashburner, C. A., Philadelphia		2				
Atherton, Thomas H.	1					
Australian Museum	1					
Barber, E. A., Philadelphia		3				
Barton, E. M., Worcester, Mass.		2				
Baur, Robert, Wilkes-Barré		1				
Beaumont, Col. E. B., U. S. A.						
Betterly, Dr. E. L., Wilkes-Barré	1					
Bogart, J. K., " "		1				
Boston Athenæum		5				
" Record Commissioners	2					
Bowman, Miss Mary, Wilkes-Barré						
Boyd, J. Andrew, " "		2				
Bradlee, C. D., Boston, Mass.		1				
Brohm, Albert, Wilkes-Barré						
Buffalo Historical Society		1				
Butler, C. E., Wilkes-Barré	1	1				
Chapman, C. I. A., Pittston	1					
Chase, E. H., Wilkes-Barré	13			14		10 2
Chicago Historical Society	1	1				
Coon, J. C., Wilkes-Barré					1	
Coons, J. D., " "		4				
Courtright, J. M., " "	1					
DeHaas, William, Washington, D. C.		2				
Dennis, Capt. J. P., Wyoming		2				
Dorrance, Col. Charles, Kingston		2				
Drown, Dr. T. M., Easton		1				
					5	

NAMES AND ADDRESSES:	Bound Volumes	Pamphlets	Manuscripts	Newspaper Files	Odd Newspapers, Broadsides, etc.	Maps, etc. . .
Egle, Dr. W. H., Harrisburg		I				
Espy, John, St. Paul, Minn.		I				
Essex Institute	30	10				
Fogel, L. J., Wilkes-Barré		I				
Foote, Prof. A. E., Philadelphia				I		
Franklin Institute		I		I		
Fry, Hon. H. C.	18	I		I		
Galveston Historical Society					I	
Georgia Historical Society			I		2	
Green, H. C. Wilkes-Barré					I	
Green, Dr. S. A., Boston	21					
Halsey, G. L., White Haven					I	
Hayden, Rev. H. E., Wilkes-Barré		I	12			
Hewitt, Hon. A. S., New York		I				
Hollenback, J. W., Wilkes-Barré	32		2			
Hoyt, Hon. H. M., Philadelphia						
Jenkins, Hon. Steuben, Wyoming	9					
Johnson, C. Ben., Wilkes-Barré	75	20		I	I	
Johnson, F. C., " "		37				
Jones, D. M.	I					
Kulp, George B., Wilkes-Barré		6			9	
Lacoe, R. D., Pittston	20	4				
Library Company of Philadelphia		5				
Long Island Historical Society		I				
Long, I. E., Wilkes-Barré						
Luzerne County Bible Society		2				
" " Commissioners		20				
Manchester Geological Society			I			
Marietta College, Ohio		I				
Mason, Prof. O. T., Washington, D. C. .		3				
McAlpine, A. W., Wilkes-Barré		I				
McClintock, Mrs. A. B., " "	50	59				
McClintock, A. H.	11		2 vol			
McCarty, Gen. W. H., " "		2				
Meade, Col. George, Philadelphia		I				
Miller, G. M., Wilkes-Barré		9				

NAMES AND ADDRESSES:

	Bound Volumes	Pamphlets	Manuscripts	Newspaper Files	Odd Newspapers Broadsides, etc.	Maps, etc.
Miller, W. M., Wilkes-Barré	5					
Miner, W. P. "		1				
Minnesota Historical Society		2				
Missouri "						
Morgan, Charles, Wilkes-Barré						
Nicholas, William, Wilkes-Barré						1
Numismatic and Antiquarian Society of Philadelphia }	4					
Ohio Philosophical and Hist. Society	1	1				
" Mechanics' Institute	1		1		1	
Old Residents' Historical Association of Lowell. }						
Paine, L. C., Wilkes-Barré						1
Paine, W. L., Washington	1					2
Perry, Miss R.		21				
Peabody Museum of Archaeology	2	13				
Peacock, Dr. J. H., Wilkes-Barré	1					
Penna. Department of Internal Affairs	6					2
Phillips, Dr. Henry, Philadelphia		2				
Quaritch, Bernard, London, Eng						
Quebec Literary and Historical Society	1					
Ræder, J. W., Wilkes-Barre	15					
Ræder, W. L. "					1	
Rau, Dr. Charles, Washington						
Reynolds, Benjamin, Wilkes-Barré		5				
Reynolds, Sheldon, "		2				
Rhode Island Historical Society	2	17				
Royal Academy of Antiquities, Stockholm. }		1				
Ryman, W. P., Wilkes-Barré	1			4	50	
Sanders, M. E. Scranton			2			
Scranton, Hon. J. A. "		1				
Session First Presbyterian Church, Wilkes-Barré. }				1		
Slocum, James S., Pittston	1					
Smithsonian Institution	1		1			
Snyder, C. B., Wilkes-Barré	85	15				

NAMES AND ADDRESSES:	Bound Volumes .	Pamphlets ,	Manuscripts .	Newspaper Files	Odd Newspapers, Broadsides, etc.	Maps, etc. .
Torbert, J. K., Wilkes-Barré	I				I	
Turkes, Adam " "						
United States Bureau of Education	I	4				
" " Chief Signal Officer	2	4				
" " Commissioner of Patents	2			I		
" " Department of Interior		4				I
" " Geological Survey	3	1				I
" " Surgeon General	2					
" " Treasury Department		3				
Virginia Historical Society	I					
Wadhams, Samuel F., Wilkes-Barré	I					
Wasser, E. C., " "			I			
Waterloo Library and Historical Society	I	I				
Welles, Edward, Wilkes-Barré	I					
Weitzel, Gen. Godfrey, Philadelphia		I				
Weymouth Historical Society		I				
Wilkes-Barré Daily Record	79	60				
" " Law and Library Ass'n	I					
Wisconsin State Historical Society					I	
Wolf, Nathaniel, Wilkes-Barré	4					
Woodward, C. L., New York						
Woodward, Hon. Stanley, Wilkes-Barré		13		I		3
Wright, George R., " "	76		I			
Wright, Harrison " "	2	6				
Wright, Miss Augusta McC. " "		I				
Yordy, E. B.		3			4	

CONTRIBUTIONS TO THE CABINETS,
FOR YEAR ENDING FEB. 11, 1884.

NAMES AND ADDRESSES:

	Numismatics	History, Archæology, Museum.	Mineralogy, Palæontology, Geology	Conchology
Bachman, Daniel, Wilkes-Barré	2			
Bailey, A. M., " "		1		
Barton, Samuel M., " "	1			
Bennett, Mrs. Priscilla Lee, Wilkes-Barré		1		
Beaumont, Col. E. B., U. S. Army		5		
Bovier, C. B., Elmira, N. Y.	1			
Burnet, Theron, Wilkes-Barré		1		
Carpenter, John B., " "				136
Clendenin, J. W., Nova Scotia				12
Coons, J. D. Wilkes-Barré	1			
Dana, Hon. E. L., Wilkes-Barré	2			
Dager, John H., Wilmington, Del.				7
Dennis, Capt. J. P., Wyoming		1		
Emery, Mrs. Samuel, Wilkes-Barré	2			
Fisher, Adam, " "	1			
Frantz, Harold, " "	1			
Græme, Joseph, " "		1		
Graham, Capt. William, " "			1	
Grosser, A., " "	1			
Hartland, Obadiah, Laurel Run		1		
Harvey, H. H., Wilkes-Barré	8			
Harvey, Robert R., " "	1			
Hayden, Rev. H. E., Wilkes-Barre				
Hennessy, W. G., New York	1			
Jones, James, Wilkes-Barré		5		
Johnson, C. Ben, " "	1			
Johnson, Wesley, " "			1	
King, Millard, Wyoming		4		
Kulp George B., Wilkes-Barré	3			

NAMES AND ADDRESSES:

		Numismatics	History, Archaeology, Museum.	Mineralogy, Palaeontology, Geology	Conchology
Lacoe, L. D., Pittston		I			
Lance, DeHaven, Plymouth		I			
McArthur, Charles, Wilkes-Barré	2			I	
McClintock, A. H., " "		9			
McClintock, A. T., " "		1			
Merrill, H. G., Wilkes-Barré		5			
Norris, James M., " "		31			
Palmer, H. W., " "		6			
Parsons, Calvin, Parsons		I			
Raeder, Peter, Wilkes-Barré		I			
Raife, Philip, " "		I			
Reynolds, Col. G. M., Wilkes-Barré		2		3	
Reynolds, John B., Kingston		2			
Reynolds, Sheldon, Wilkes-Barré		7			
Ricketts, Col. R. B., " "			I		
Sharer, Christian H., Providence				6	
Sharpe, Richard, Wilkes-Barré		13			
Shiffer, Henry, Hanover			8		
Shoemaker, Mrs. L. D., Wilkes-Barré					34
Stearns, Irving A., " "			26		
St. John, C. E., " "		I			
Strowbridge, T. R., New York, N. Y			I		
Sutherland, C. F., Pittston			I		
Trescott, M. B., Huntington			I	I	
Wadhams, Sam F., Wilkes-Barré	14	I			
Wood, George, " "		I			
Wood, J. G., " "		I			
Wright, Miss. A. McC., " "	22				
Wright, Mrs. E. L., " "		I			
Wright, Harrison, " "	28	8			
Wright, J. R., " "	16	2		3	

Meteorological Observations taken at Wilkes-Barre, Pa., for February, 1883, by E. L. Dana.

THERMOMETER.										BAROMETER.		REMARKS.				
	Clouds.	Wind.	Clouds.	Wind.	Clouds.	Wind.	Avg. Temp.	Max.	Min.	At. Th.	At. Th.	At. Th.	At. Th.	At. Th.	At. Th.	
21	0	8 C. S.	2 S. E.	5 C. S.	6 S.	17 20/4	o	W.	29.48	29.58	29.38	60	3d. Slight rain, freezing to sleet;			
22	10	8 C. S.	2 N. E.	5 C. S.	2 W.	25 21/2	o	C. S.	29.98	29.95	29.82	56	rain at 7:30 P. M.			
23	32	10 C. S.	2 N. E.	10 C. S.	1 E.	37 6/2	10 R.	2 N. E.	29.72	28.53	26.62	64	4th. Rain fall to 9 A. M., 14 in.; to			
24	46	10 R.	4 C. S.	4 C. S.	4 N.	31 37/2	8 C. S.	2 N. E.	29.30	29.53	29.67	66	5th. Ice broke up at 10 A. M.; ice	.22 in.		
25	26	10 C. S.	3 S.	4 C. S.	27	0	o	2 N. E.	29.64	29.59	29.68	58	gorge formed.			
26	12	1 C. C.	1 S.	29	3 C. S.	4 W.	26 23/4	10 C. S.	2 S. E.	29.71	28.93	29.66	45	6th. Rain and sleet began at 7, con-		
27	34	1 D. C. S.	2 S.	41	8 C. Cu.	8 W.	30 33/4	1 C. S.	2 W.	28.96	28.94	29.40	74	tinuing at 9 P. M.		
28	8	5 C. Cu.	2 S.	29	o	5 W.	26 6/2	o	W.	29.40	28.83	29.58	66	53 in.		
29	9	11 C. S.	4 S.	36	3 C. S.	8 W.	31 29/2	o	W.	29.64	29.63	29.74	67	7th. Rain and sleet last night . . .		
30	10	7 C. Cu.	o	43	5 C. Cu.	o	25 4/4	10	S. W.	29.90	29.53	29.88	54	8th. Ice gorge still continues;		
31	31	10 C. S.	o	49	10 C. S.	3 N.	30 35/4	10	C. S.	29.27	28.89	29.52	65	9th. Snow full last night, beginning		
32	59	4 C. Cu.	4 N.	34	5 C. S.	2 N.	27 21/4	10	R.	29.75	28.63	29.78	34	at 9.		
33	10	3 C. S.	3 S.	35	10 R.	3 W.	32 29/2	10	R.	29.62	29.56	29.73	58	14th. Rain and snow, 9:30 A. M. to		
34	18	10 C. S.	2 N. W.	37	10 C. S.	1 W.	37 36/2	10	C. S.	29.49	29.29	29.47	60	5 P. M.		
35	35	10 C. S.	2 N. W.	41	10 C. S.	1 W.	43 4/4	10	C. S.	29.60	29.52	29.57	67	15th. Rain last night,		
36	37	10 C. S.	2 S. W.	44	10 C. S.	2 N.	36 39	10	C. S.	29.30	29.33	29.60	66	16th. Day from 12:45 P. M. to 2		
37	49	10 Fog.	o	52	33	7 C. Cu.	2 E.	26 7/4	o	3 N. W.	29.78	28.82	29.77	65	P. M., 12; total	
38	26	10 C. S.	2 N.	49	o	5 S. W.	32 33/4	7	C. Cu.	29.72	34	39	63	.35 in. 7th. Ice gorge continues; height of		
39	29	10 C. S.	3 S.	49	o	5 C. Cu.	2 W.	39 35/4	10	C. S.	29.64	34	29.45	65	river varies fr. 13-15 ft.	
40	25	10 C. S.	3 N. E.	49	o	5 C. Cu.	2 S.	28 28/4	o	2 N.	29.30	32	29.35	69	22d. Slight snow in evening; ice	
41	25	5 C. Cu.	4 N.	34	3 C. Cu.	5 S.	32 33/4	10	C. S.	29.30	32	29.20	64	gorge continues; river 15 ft.		
42	32	10 C. S.	2 S.	42	7 C. Cu.	4 S.	36 36/2	10	C. S.	29.30	32	29.20	68	23d. River 14 ft. above low water.		
43	23	1 C. Cu.	4 W.	28	1 Cir.	4 N.	20 22/4	o	2 N.	29.57	25	29.71	63	Slight snow and rain began at		
44	11	1 C. S.	1 S.	33	10 C. S.	4 S.	32 27/4	10	C. S. R.	29.92	32	29.85	64	24th. Slight snow and rain began at 9 P. M.		
45	44	10 C. S.	3 S.	45	10 C. S. R.	1 S.	38 41/4	5	C. S.	29.20	32	29.15	62	7 P. M. and at 9 P. M.		
46	29	5 C. Cu.	3 S.	33	10 C. Cu.	5 N. W.	20 25/2	6	C. S.	29.35	36	29.35	60	25th. Rain and snow last night and		
47	14	5 C. Cu.	4 W.	25	1 Cir. Cu.	4 N. W.	24 21/2	10	C. S.	29.63	46	29.65	56	night before; rain 1:45 P. M.		
48	34	10 C. S.	2 W.	34	o	4 N.	26 39	o	5 S. W.	29.35	38	38	63	.51 in. 26th. Flurries of snow, P. M. and		
										29.35	38	38	65	evening.		
														27th. Flurries of snow in evening.		
														Av. Temp. 39°. Total 2.38 in.		

Meteorological Observations taken at Wilkes-Barre, Pa., for March, 1883, by E. L. Dana.

Meteorological Observations taken at Wilkes-Barre, Pa., for March, 1883, by E. L. Dana.

THERMOMETER.		BAROMETER.		REMARKS.	
Day.	N.	Clouds.	Wind.	Temp.	
7 A.M.	8 A.M.	Clouds.	Wind.	9 P.M.	Avt. Th.
1 26 4 Cir.	○ 1 S.	○ 1 C. Cu. 4 N.	○ 1 S. W.	29.68	48 29.60 67 29.50 68
2 41 4 C.S.	○ 2 6 4 C.S.	○ 3 2 C. Cu. 4 N.	○ 4 2 C. Cu. 5 C. S.	29.58	47 29.46 67 29.35 65
3 26 4 C.S.	○ 2 6 4 C.S.	○ 3 2 C. Cu. 4 N.	○ 4 2 C. Cu. 5 C. S.	29.47	55 29.46 67 29.35 65
4 28 4 C.S.	○ 2 6 4 C.S.	○ 3 2 C. Cu. 4 N.	○ 4 2 C. Cu. 5 C. S.	29.33	49 29.30 68 29.60 65
5 20 3 C.S.	○ 2 6 4 C.S.	○ 3 2 C. Cu. 4 N.	○ 4 2 C. Cu. 5 C. S.	29.68	44 29.70 68 29.68 68
6 22 3 C.S.	○ 2 6 4 C.S.	○ 3 2 C. Cu. 4 N.	○ 4 2 C. Cu. 5 C. S.	29.50	47 29.64 68 29.54 68
7 29 3 C.Cu.	○ 3 N.	○ 3 10 C. Cu. 3 S.	○ 4 10 Cir.	29.50	47 29.64 68 29.54 68
8 7 ○	○ 3 N.	○ 3 10 C. Cu. 3 S.	○ 4 10 Cir.	29.72	52 29.69 68 29.56 66
9 32 ○	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.56	45 29.45 69 29.42 68
10 29 ○	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.00	55 29.38 67 28.75 60
11 13 14 1 C. Cu. 9 C. Cu. 5 S.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	28.86	48 29.86 68 29.37 60
12 13 14 1 C. Cu. 9 C. Cu. 5 S.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.40	59 29.25 68 29.26 66
13 14 1 C. Cu. 9 C. Cu. 5 S.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.20	59 29.72 29.30 66
14 15 16 1 C. Cu. 9 C. Cu. 5 S.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	28.88	58 29.08 68 29.00 65
15 16 17 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.26	59 29.27 68 29.19 63
16 17 18 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.00	53 29.16 66 29.10 61
17 18 19 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.08	59 29.04 70 29.19 76
18 19 20 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.20	68 29.15 70 29.17 72
19 20 21 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.08	62 29.15 70 29.17 72
20 21 22 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.27	59 29.29 70 29.40 71
21 22 23 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.15	59 29.30 63 29.23 62
22 23 24 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.40	51 29.40 66 29.45 54
23 24 25 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.30	58 29.40 66 29.45 63
24 25 26 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.34	58 29.73 70 29.42 72
25 26 27 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.21	61 29.71 68 29.23 72
26 27 28 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.30	59 29.31 74 29.40 76
27 28 29 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.16	60 29.31 67 29.30 72
28 29 30 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Snow.	○ 5 Cir.	29.16	60 29.31 70 29.30 65
29 30 31 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Fog.	○ 5 Cir.	29.28	52 29.31 70 29.31 65
30 31 32 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Fog.	○ 5 Cir.	29.28	Total 2.55 in.
31 32 33 1 C. Cu. 9 C. Cu. 5 W.	○ 3 N. E.	○ 4 10 Fog.	○ 5 Cir.	29.28	3 P. M., 3 1/4 in.; water 56 in.

Meteorological Observations Taken at Wilkes-Barre, Pa., for April, 1883, by E. L. Dana.

Day.	THERMOMETER.				BAROMETER.				REMARKS.													
	7 A.M.	2 P.M.	7 P.M.	12 M.	Wind.	Clouds.	Temp.	Atmos.	Atm.	Atm.	Atm.	Atm.	Atm.	Atm.	Atm.	Atm.						
1	23	°	8 Cir.	4 N. E.	40	2 Cir.	S.	1 W.	33	32 1/4	o	3 N.	°	29.45	60	29.42	66	29.45	64			
2	23	°	8 Cir.	4 N.	49	2 Cir.	S.	1 S. W.	34	36	o	29.54	63	29.49	59	29.44	62	29.45	61			
3	39	0	2 E.	49	2 Cir.	S.	3 N.	36	37 1/4	o	3 S. W.	29.50	62	29.49	72	29.50	66	29.45	64			
4	35	0	2 E.	58	2 Cir.	S.	2 S. W.	58	58	o	29.50	60	29.49	59	29.45	68	29.45	67				
5	49	10	C. S.	3 N.	74	2 Cir.	S.	2 S.	60	68 1/2	o	29.39	62	29.49	73	29.47	76	29.45	75			
6	52	10	Nimb.	4 N.	56	2 Cir.	Cu.	4 N.	48	51	o	29.18	74	29.49	73	29.42	70	29.45	69			
7	45	10	C. S.	1 S.	58	3 Cir.	Cu.	1 E.	41	46 1/4	o	59.10	64	29.49	72	29.45	78	29.45	77			
8	49	10	C. S.	4 N.	54	4 Cir.	Cu.	4 S. W.	40	43 1/2	o	29.44	67	29.45	54	29.58	68	29.45	67			
9	36	0	2 S.	67	2 Cir.	Cu.	2 S.	50	59 1/2	o	29.60	62	29.50	69	29.43	68	29.45	67				
10	46	2 C. S.	73	3 Cu.	66	61 1/4	2 S.	56	57 1/2	o	29.60	68	29.48	70	29.43	68	29.45	67				
11	59	12	49	47	64	48	48	48	48	48	o	29.20	60	29.43	70	29.40	60	29.45	67			
12	49	12	49	47	69	52	53 1/2	52	53 1/2	52	53 1/2	o	29.63	70	29.62	60	29.62	60	29.62	60		
13	46	10	49	47	69	52	53 1/2	52	53 1/2	52	53 1/2	o	29.53	63	29.43	74	29.40	68	29.45	67		
14	50	10	49	47	69	52	53 1/2	52	53 1/2	52	53 1/2	o	29.30	64	29.39	74	29.33	74	29.35	74		
15	46	0	2 W.	69	8 C. S.	4 S.	4 S.	53	55 1/2	8 C. S.	53	55 1/2	o	29.44	71	29.39	72	29.35	73	29.40	72	
16	52	10	C. S.	2 W.	57	10 C. N. im.	1 N.	50	52 1/2	10 C. S.	4 N.	50	52 1/2	o	29.14	70	29.23	74	29.19	75	29.20	74
17	49	9	C. S.	4 E.	64	3 Cir.	S.	3 N. E.	54	55 1/2	o	57	65	5 C. S.	o	29.48	75	29.49	75	29.54	75	
18	48	5	C. S.	5 N.	68	4 Cir.	S.	4 S.	52	55	o	57	65	10 C. S.	o	29.14	70	29.23	74	29.19	75	
19	56	5	Cu. S.	5 S.	70	5 Cir.	S.	4 S.	44	45 1/4	o	54	52 1/2	10 Cir.	4 N.	29.48	75	29.49	75	29.54	75	
20	40	10	Nimb.	8 N. E.	53	1 Cir.	Cu.	8 W.	38	43 1/2	o	54	52 1/2	10 Cir.	4 N.	29.33	65	29.45	70	29.40	70	
21	43	12	C. S.	0	61	4 Cir.	Cu.	3 W.	38	43 1/2	o	54	52 1/2	10 Cir.	4 N.	29.10	63	29.49	70	29.15	63	
22	47	10	C. S.	4 N. E.	49	10 C. S. R.	3 N. E.	38	43 1/2	o	54	52 1/2	10 Cir.	4 N.	29.15	60	29.49	70	29.20	74		
23	40	10	C. S.	2 N. E.	39	10 C. S. R.	3 N. E.	35	37 1/2	o	54	52 1/2	10 Cir.	4 N.	29.34	60	29.49	70	29.35	72		
24	39	10	C. S.	2 N.	46	10 C. Cu.	2 N.	34	38 1/2	o	50	59 1/2	10 C. S.	5 S.	29.54	64	29.45	70	29.34	72		
25	33	4	C. S.	2 W.	44	9 Cir.	S.	5 N. W.	40	39 1/2	o	53	55 1/2	10 Cir.	5 S.	29.25	68	29.49	70	29.30	72	
26	42	2	Cir.	2 S. W.	61	3 Cir.	S.	5 S. W.	53	55 1/2	o	53	55 1/2	10 Cir.	4 N.	29.10	60	29.49	70	29.15	60	
27	51	5	C. Cu.	2 S.	62	3 Cir.	Cu.	5 S. W.	43	49 1/2	o	50	59 1/2	10 Cir.	4 N.	29.46	61	29.48	70	29.52	72	
28	44	10	C. S.	5 N.	56	10 C. S.	5 N.	40	45	o	53	55 1/2	10 Cir.	4 N.	29.20	62	29.41	72	29.31	72		
29	47	10	C. S.	5 N.	53	0 Cum.	5 N.	40	45	o	52	3 E.	5 N.	53	0 Cum.	5 N.	29.46	61	29.48	70	29.52	72
30	36	0		2 N. E.	62	3 Cum.	2 E.															

Total rain fall 2.70 in.

Average Temp. 48 2/3°.

METEOROLOGICAL OBSERVATIONS.

Meteorological Observations taken at Wilkes-Barre, Pa., for May, 1883, by E. L. Dana,

Day.	THERMOMETER.				BAROMETER.				REMARKS.			
	7 A. M.	2 P. M.	9 P. M.	12 M.	7 A. M.	2 P. M.	9 P. M.	12 M.	7 A. M.	2 P. M.	9 P. M.	12 M.
1	48	9 C. S.	W.	1 W.	58	10 C. S.	4 S.	E.	50	55	5 C. S.	3d. River 1 ft.
2	52	0	2 N.	0	74	0	5 C. S.	4 S. W.	57	60	5 C. S.	4th. Thunder storm with hail, 6.45 to .74 in.
3	54	0	0	0	80	2 C. S.	4 S. W.	67	67	10 Rain.	7-50 P. M.; rain fall .15 to .18 in.	
4	54	0	4 E.	84	1 C. S.	3 N.	61	66	10 Rain.	A. M. .19; to 2 P. M. .15 to .18 in.		
5	54	10	R.	3 S. E.	57	2 C. S.	55	55	10 Rain.	P. M. 15.		
6	53	8 C. Cu.	5 N. E.	64	2 C. S.	6 N.	52	55	0	6th. River 3 ft. R. F. last night .83 in.		
7	47	10	C. S.	65	10 C. S.	2 S.	58	57	0	7th. Storm 3-30 to 4-30 P. M.; high wind; southern pt. of country .10 in.		
8	61	4 C. Ir.	1 S. E.	80	6 C. Cu.	5 N. E.	64	67	0	8th. Storm 3-30 to 4-30 P. M.; high wind; southern pt. of country .10 in.		
9	56	0	6 N.	77	2 S.	64	65	0	5 N.	wind; southern pt. of country .10 in.		
10	58	0	1 N.	84	2 C. Cu.	3 S.	76	73	0	5 N.	tornado; rain fall .16 in.	
11	68	10	C. S.	67	4 C. Cu.	4 S.	57	62	0	5 N.	rain fall at 8 P. M.	
12	48	0	2 S.	68	4 C. Cu.	4 S.	57	57	10	5 N.	High S. wind at 8 P. M.	
13	48	0	2 W.	58	3 C. Cu.	5 S.	46	49	0	5 N.	9th. Rain fall last night .10 in.	
14	51	9 C. S.	0	59	10 C. S.	2 S. E.	52	53	10	5 N.	10th. Rain fall last night .10 in.	
15	55	10 C. S.	3 N.	54	10 C. S.	4 N.	55	54	10	5 N.	11th. Rain fall last night .10 in.	
16	52	2 C. Cu.	3 N.	62	0	10 N. W.	48	52	0	5 N.	12th. Rain fall last night .10 in.	
17	59	0	0	69	0	53	53	0	5 N.	13th. Rain fall last night .10 in.		
18	48	5 C. S.	0	78	5 C. S.	3 W.	64	63	0	5 N.	14th. Rain fall last night .10 in.	
19	59	0	2 W. W.	84	5 C. S.	8 S.	66	68	0	5 N.	15th. Rain fall last night .10 in.	
20	65	5 C. S.	5 S. E.	80	7 C. S.	8 S.	66	69	10	5 C. S.	16th. Rain fall last night .10 in.	
21	64	10 C. Cu.	2 W.	63	10 Cir. R.	4 N.	61	68	0	5 C. Cu.	17th. Rain fall last night .10 in.	
22	62	10 C. S.	5 N.	60	10 N. M. R.	4 E.	57	59	10	5 C. Cu.	18th. Rain fall last night .10 in.	
23	59	10 R. C.	4 W. I.	52	10 C. Cu.	2 E.	52	51	10	5 C. S.	19th. Rain fall last night .10 in.	
24	59	10 R. C.	4 S. W.	59	10 C. Cu.	2 E.	7 W.	56	61	0	5 C. S.	20th. Rain fall last night .10 in.
25	54	7 C. S.	2 N.	80	7 C. S.	6 S. W.	70	68	0	5 S.	21st. Rain fall last night .10 in.	
26	64	0	2 W. W.	85	7 C. S.	6 S. W.	73	70	10	5 S.	22th. Rain fall last night .10 in.	
27	59	0	3 S. E.	73	2 Cum.	2 E.	63	64	0	5 S.	23th. River 2 ft.	
28	56	0	3 S. E.	73	3 Cum.	6 W.	66	67	10	5 S. W.	24th. Rain during morning .19 in.	
29	56	10 St. R.	3 S. W.	70	9 C. Cu.	7 S. W.	69	63	10	5 S. W.	25th. Rain fall last night .35 in.	
30	57	10 C. S.	5 N.	67	10 C. S.	5 N.	65	63	10	5 S. Cu.	26th. Rain fall last night .35 in.	
31	66	0	0	73	5 C. Cu.	[W.]	59	63	14	0	27th. Total rain fall .535 in.	
				29	10	85	29	42	74.		Av. Temp 61°. Total rain fall .535 in.	

METEOROLOGICAL OBSERVATIONS.

47

Meteorological Observations taken at Wilkes-Barre, Pa., for June, 1883, by E. L. Dana.

THERMOMETER.				BAROMETER.				REMARKS.			
Day.	7 A.M.	2 P.M.	9 P.M.	Atm.	7 A.M.	2 P.M.	9 P.M.	Atm.	7 A.M.	2 P.M.	9 P.M.
1	59	3 Cu.	2 W.	60°	2 N. W.	54°	59°	29.60	70°	29.73	71°
2	57	0	0	64°	2 S.	64°	60°	29.65	70°	29.73	71°
3	58	10	C. S.	75	8 Cu.	70	63 ^{1/2}	29.70	69°	29.60	70°
4	68	10	C. S.	83	3 Cu.	72	79 ^{1/2}	29.70	69°	29.50	71°
5	70	7	C. S.	86	1 Cu.	4 W.	70	47	74	29.46	78°
6	72	5	C. S.	87	7 Cu.	1 S.	70	73 ^{1/2}	10 R.	29.56	76
7	64	9	C. S.	82	3 Cu.	2 W.	68	73 ^{1/2}	9 C. S.	29.45	79
8	64	9	C. S.	82	3 Cu.	2 W.	70	73 ^{1/2}	10 R.	29.45	79
9	68	0	0	85	3 Cu.	2 S. E.	73	73 ^{1/2}	1 Cu.	29.26	75
10	74	0	0	87	3 Cu.	2 W.	80	80 ^{1/2}	8 C. S.	29.26	77
11	76	5	C. S.	81	4 Cu.	4 S. W.	60	69 ^{1/2}	0	29.20	79
12	68	0	3 S.	84	0	3 S. W.	75	72 ^{1/2}	10	29.62	82
13	74	2	Cir.	68	10	R.	64	69 ^{1/2}	0	29.25	76
14	58	0	0	73	0	0	61	63 ^{1/2}	0	29.10	79
15	58	0	0	80	0	0	66	65 ^{1/2}	2 S. E.	29.40	79
16	68	3 Cir.	3 S.	74	9 Cu.	4 S.	60	65 ^{1/2}	9 C. S.	29.66	64
17	62	9 S.	0	78	5 Cu.	2 S. W.	71	70 ^{1/2}	0	29.55	74
18	66	10 C. S.	2 S.	64	8 Cu.	2 S.	69	67	10 C. S.	29.42	72
19	67	10 C. S.	0	83	2 Cu.	2 S.	72	73 ^{1/2}	3 S.	29.39	74
20	68	0	4 S.	73	8 Cu.	2 S.	64	65 ^{1/2}	10 C. S.	29.14	72
21	65	10 C. S.	2 S.	72	8 Cu.	1 N.	65	69 ^{1/2}	5 C. S.	29.15	70
22	62	Pog.	1 W.	74	4 Cu.	1 W.	75	71 ^{1/2}	0	29.20	74
23	64	0	1 N.	81	3 Cu.	1 N. E.	68	70 ^{1/2}	2 W.	29.35	72
24	68	1 Cir.	1 N.	81	4 Cu.	2 S.	75	74 ^{1/2}	4 C. Cu.	29.40	73
25	72	1 W.	1 N. E.	81	9 Cu.	1 S. E.	72	74 ^{1/2}	10 Nimb.	29.35	78
26	79	Nimb.	N. E.	71	10 Nimb.	N. N.	72	74 ^{1/2}	10 Nimb.	29.30	80
27	69	to Nimb.	S. W.	72	9 Nimb.	N. Nimb.	66	68 ^{1/2}	9 Nimb.	29.25	78
28	68	to Nimb.	S. W.	80	7 Cu.	S. E.	71	74	0	29.25	78
29	70	3 Cu.	0	84	5 Cu.	E.	70	73 ^{1/2}	4 Cu.	29.20	80
30	66	Fog.	0	74	4 Cu.	E.	60	65	0	29.15	82

4th. Rain fall last night ; light thunder. Rain began at 7 P. M.; rain continued at 9 P. M.

6th. Rain continued ; heavy thunder in night ; R. F. 57°; to-day .21 .78 in.

7th. Rain fall last evening ; R. last night .19 in.

8th. Rain fall this afternoon ; R. last night .29 in.

10th. Rain with thunder and lightning, from 7:30 to 8:30 P. M.

11th. R. last night .11; to 11:30 A. M. .03 .69 in.

12th. R. last night .99 ; river at noon yesterday 1 ft.; to-day 3 ft.

13th. Rain last night .90 in.

14th. R. last night .90 in.

15th. R. last night .90 in.

16th. R. last night .90 in.

17th. R. last night .90 in.

18th. R. last night .90 in.

19th. R. last night .90 in.

20th. R. last night .19; slight R. after n.

21st. R. last night and afternoon .10 in.

22d. Rain 8 to 9 P. M. .07 in.

23d. Rain last night .11 in.

24th. Rain 11:30 A. M. .33 in.

25th. R. 9 P. M. yesterday to 9 A. M. 10- day 3:21; to-day .65 .386 in.

26th. Rain .26 in.

27th. Rain .26 in.

28th. Rain .26 in.

Total rain fall 8.13 in.

Average Temp. for month 70°^{2/3}°.

METEOROLOGICAL OBSERVATIONS.

Meteorological Observations taken at Wilkes-Barre, Pa., for July, 1883, by E. L. Dana.

Day.	THERMOMETER.				BAROMETER.				REMARKS.			
	7 A. M.	2 P. M.	7 A. M.	2 P. M.	7 A. M.	2 P. M.	7 A. M.	2 P. M.	Alt. Th.	9 P. M.	Alt. Th.	9 P. M.
1	53 ° C. S.	80 ° S. E.	80 ° 2 C. S.	76 ° 4 C. S.	67.68	68.0	29.50	68.40	70 °	70 °	73 °	73 °
2	70 2 C. S.	89 4 C. S.	94 3 Cu. S.	74 2 Cu. S.	74 1/2 °	74 1/2 °	29.70	29.70	29.70	29.70	29.70	29.70
3	74 1 C. S.	90 5 Cu. S.	94 2 Cu. S.	78 2 Cu. S.	78 1/2 °	78 1/2 °	29.35	29.35	29.35	29.35	29.35	29.35
4	78 0	92 6 Cu. S.	94 4 Cu. S.	86 4 Cu. S.	74 1/2 °	74 1/2 °	29.45	29.45	29.45	29.45	29.45	29.45
5	78 2 Cir.	90 7 Cu. S.	86 5 Cu. S.	86 5 Cu. S.	74 1/2 °	74 1/2 °	29.44	29.44	29.44	29.44	29.44	29.44
6	78 0	73 8 Rain.	86 4 Cu. S.	86 5 Cu. S.	77 79 1/2 °	77 79 1/2 °	29.39	29.39	29.39	29.39	29.39	29.39
7	78 0	73 9 Rain.	86 4 Cu. S.	86 5 Cu. S.	75 66 10 °	75 66 10 °	29.37	29.37	29.37	29.37	29.37	29.37
8	66 10 Rain.	70 10 W.	70 10 R.	70 10 N.	65 67 1/2 °	65 67 1/2 °	29.36	29.36	29.36	29.36	29.36	29.36
9	63 9 C. S.	71 10 E. W.	73 7 Cu. S.	73 7 Cu. S.	73 71 1/2 °	73 71 1/2 °	29.40	29.40	29.40	29.40	29.40	29.40
10	59 2 Cir.	61 10 W.	82 10 Cir. Cu. S.	82 10 Cir. Cu. S.	75 75 1/2 °	75 75 1/2 °	29.33	29.33	29.33	29.33	29.33	29.33
11	69 9 C. S.	72 10 W.	84 10 Cu. S.	84 10 Cu. S.	76 76 1/2 °	76 76 1/2 °	29.40	29.40	29.40	29.40	29.40	29.40
12	71 2 C. S.	71 10 W.	81 10 Nimb.	81 10 C. U.	71 71 1/2 °	71 71 1/2 °	29.04	29.04	29.04	29.04	29.04	29.04
13	75 1 C. S.	83 10 S. E.	83 10 Cir. Cu. S.	83 10 Cir. Cu. S.	73 74 1/2 °	73 74 1/2 °	29.27	29.27	29.27	29.27	29.27	29.27
14	69 1 C. S.	83 10 S. E.	83 10 Cu. Nimb.	83 10 Cu. Nimb.	74 74 1/2 °	74 74 1/2 °	29.25	29.25	29.25	29.25	29.25	29.25
15	69 9 C. S.	83 10 W.	83 10 Cir. Cu. S.	83 10 Cir. Cu. S.	74 76 1/2 °	74 76 1/2 °	29.32	29.32	29.32	29.32	29.32	29.32
16	72 9 Cu. S.	88 10 W.	88 10 Cir. Cu. S.	88 10 Cir. Cu. S.	75 75 1/2 °	75 75 1/2 °	29.30	29.30	29.30	29.30	29.30	29.30
17	72 3 Cir. Cu.	78 10 W.	78 10 Nimb.	78 10 Cir. Cu. S.	77 71 1/2 °	77 71 1/2 °	29.48	29.48	29.48	29.48	29.48	29.48
18	72 0	72 10 W.	72 10 Cir. Cu. S.	72 10 Cir. Cu. S.	72 68 1/2 °	72 68 1/2 °	29.52	29.52	29.52	29.52	29.52	29.52
19	63 0	78 10 W.	78 10 Cir. Cu. S.	78 10 Cir. Cu. S.	66 68 1/2 °	66 68 1/2 °	29.57	29.57	29.57	29.57	29.57	29.57
20	63 0	80 10 W.	80 10 Cir. Cu. S.	80 10 Cir. Cu. S.	73 72 °	73 72 °	29.54	29.54	29.54	29.54	29.54	29.54
21	62 8 Cir.	87 10 W.	87 10 Cir. Cu. S.	87 10 Cir. Cu. S.	78 79 1/2 °	78 79 1/2 °	29.44	29.44	29.44	29.44	29.44	29.44
22	74 8 C. S.	82 10 S. E.	74 9 C. Cu. S.	74 9 C. Cu. S.	75 75 1/2 °	75 75 1/2 °	29.38	29.38	29.38	29.38	29.38	29.38
23	76 10 C. S.	72 10 W.	74 9 C. Cu. S.	74 9 C. Cu. S.	66 68 1/2 °	66 68 1/2 °	29.42	29.42	29.42	29.42	29.42	29.42
24	70 10 C. S.	70 10 W.	70 10 Nimb.	70 10 Cir. Cu. S.	70 70 1/2 °	70 70 1/2 °	29.48	29.48	29.48	29.48	29.48	29.48
25	65 2 C. S.	72 10 W.	72 10 Cir. Cu. S.	72 10 Cir. Cu. S.	67 69 1/2 °	67 69 1/2 °	29.28	29.28	29.28	29.28	29.28	29.28
26	68 1 C. S.	81 10 W.	83 10 Cir. Cu. S.	83 10 Cir. Cu. S.	68 69 1/2 °	68 69 1/2 °	29.30	29.30	29.30	29.30	29.30	29.30
27	65 8 Cu. S.	85 10 W.	85 10 Cir. Cu. S.	85 10 Cir. Cu. S.	77 76 °	77 76 °	29.42	29.42	29.42	29.42	29.42	29.42
28	68 8 Cir.	80 10 S. E.	80 10 Cir. Cu. S.	80 10 Cir. Cu. S.	70 70 1/2 °	70 70 1/2 °	29.40	29.40	29.40	29.40	29.40	29.40
29	68 0	78 10 S. E.	78 10 Cir. Cu. S.	78 10 Cir. Cu. S.	63 68 1/2 °	63 68 1/2 °	29.33	29.33	29.33	29.33	29.33	29.33
30	62 0	78 10 S. E.	78 10 Cir. Cu. S.	78 10 Cir. Cu. S.	65 67 1/2 °	65 67 1/2 °	29.42	29.42	29.42	29.42	29.42	29.42
31	68 0	79 10 S. E.	79 10 Cir. Cu. S.	79 10 Cir. Cu. S.	71 70 1/2 °	71 70 1/2 °	29.40	29.40	29.40	29.40	29.40	29.40

Total rain fall 6.4 in.
 Average Temp. 73°.

Meteorological Observations taken at Wilkes-Barre, Pa., for August, 1883, by E. L. Dana.

Day.	THERMOMETER.				BAROMETER.				REMARKS.
	7 A.M.	2 P.M.	7 A.M.	2 P.M.	Atmos.	Atm.	At.	Th.	
1	65	9 C. S.	1 S.	84	4 Cu. S.	2 S.	74	74½	2d. Rain during night .05; rain about noon .12. .17 in.
2	74	10 Nimb.	2 W.	79	10 Nimb.	2 S. W.	72	74½	2 Nimb. .00 in.
3	69	8 Cir.	80	6 Cu. S.	70	72½	3 Cu. S.	1 N.	29.34 72 29.26 70 29.05 85 29.05 85
4	68	2 Cir.	76	2 Cu.	76	73½	3 W.	64	66 29.12 79 29.34 74 29.38 75
5	62	o	76	4 Cu.	76	74½	3 W.	64	66 29.12 79 29.34 74 29.44 75
6	62	o	80	8 Cu.	72	72½	2 N. W.	64	66 29.12 79 29.34 74 29.44 75
7	54	o	80	o	72	72½	2 N.	63	65 29.12 79 29.34 74 29.44 75
8	54	o	87	o	72	72½	2 S.	66	68 29.12 79 29.34 74 29.44 75
9	59	o	81	4 Cu.	72	72½	2 S. E.	68	69 29.12 79 29.34 74 29.44 75
10	58	7 Cir.	81	7 Cu.	72	72½	1 N.	67	68 29.12 79 29.34 74 29.44 75
11	59	o	84	5 Cir. S.	72	72½	2 N.	68	69 29.12 79 29.34 74 29.44 75
12	59	o	84	8 Cu. S.	72	72½	2 W.	70	72 29.12 79 29.34 74 29.44 75
13	59	10 Nimb.	80	8 Nimb.	72	72½	4 S.	72	72 29.12 79 29.34 74 29.44 75
14	64	4 Cu. S.	75	7 Cu. S.	72	72½	2 N.	62	65 29.12 79 29.34 74 29.44 75
15	56	2 S.	75	7 Cu. S.	72	72½	2 S.	67	65 12 2 Nimb. 1 W.
16	60	10 Nimb.	75	10 Nimb.	68	60	2 S.	64	64 10 Nimb. 1 W.
17	65	10 Nimb.	75	7 Cu. S.	72	72½	1 W.	71	71 12 2 Cir. 1 W.
18	62	2 C. Cu.	87	9 Nimb.	72	72½	2 W.	69	71 12 2 Cir. 1 W.
19	67	4 C. S.	89	4 Cu.	72	72½	2 W.	74	76 1 C. S. 1 E.
20	60	Fog.	90	5 Cu. S.	72	72½	2 N.	81	81 1 C. S. 1 W.
21	71	o	98	o	72	72½	2 W.	72	76 1 C. S. 1 W.
22	62	1 E.	92	o	72	72½	2 S.	80	79 1 S. 1 W.
23	76	4 C. S.	90	3 Cu. S.	75	79	3 S.	60	65 12 1 E. 1 W.
24	66	o	76	o	72	72½	2 Cu.	61	65 12 1 E. 1 W.
25	54	o	71	N. E.	79	72	1 E.	61	65 12 1 E. 1 W.
26	55	o	71	Fog.	71	8 Cu.	1 E.	61	62 1 W.
27	52	o	71	1 E.	77	8 C. S.	1 W.	55	64 1 W.
28	54	8 C. S.	71	1 S.	72	8 C. S.	1 E.	65	64 8 Nimb. 2 E.
29	61	to Nimb.	76	6 Cir. S.	72	8 C. S.	1 N. E.	66	65 12 6 Cir. S. 2 W.
30	59	9 Nimb.	71	6 Cir. S.	71	8 C. S.	1 N. E.	66	65 12 6 Cir. S. 2 W.
31	58	2 C. S.	79	1 C. S.	72	8 C. S.	1 W.	62	65 12 6 Cir. S. 2 W.

Meteorological Observations taken at Wilkes-Barre, Pa., for September, 1883, by E. L. Dana.

METEOROLOGICAL OBSERVATIONS.

5 E

Meteorological Observations Taken at Wilkes-Barre, Pa., for October, 1883, by E. L. Dana.

THERMOMETER.										BAROMETER.										
REMARKS.																				
Day.	Clouds.	Wind.	Avg. Temp.	Temp. at 4 P.M.	Clouds.	Wind.	Avg. Temp.	Temp. at 4 P.M.	Clouds.	Wind.	Avg. Temp.	Temp. at 4 P.M.	Clouds.	Wind.	Avg. Temp.	Temp. at 4 P.M.	Clouds.	Wind.	Avg. Temp.	Temp. at 4 P.M.
1	41	1 Cu.	2 N. E.	57	1 Cir.	2 W.	43.46	9 Cu. S.	0	9 p.m.	29.31	29.30	71	2d.	Rain yesterday and last night.	.12 in.				
2	40	no Nimb.	5 S.	55	2 Nimb.	W.	49.51	9 Cu. S.	0	9 p.m.	29.03	64.85	76	10	Rain during night.	.42 in.				
3	42	0	2 S.	60	2 Cu.	4 S.	48.91	9 Cu. S.	0	9 p.m.	29.31	69.29	75	12	Rain 3 ft.	.52 in.				
4	41	1 Cir.	1 N. W.	53	2 Cir.Cu.	4 N.	38.43	9 Cu. S.	0	9 p.m.	29.65	72	59	13	Severe frost, first to do damage.					
5	32	0 Fog.	2 S. W.	45	10 S. R.	3 W.	37.39	9 Cu. S.	0	9 p.m.	29.66	62	70	14	Rain began 1 P.M.; raining 9 P.M.					
6	38	8 Cir. S.	5 S.	53	10 S. R.	3 W.	44.42	10 Nimb.	1 N. E.	9 p.m.	29.68	62	70	15	Rain fall last night.	.20 in.				
7	45	10 Cu. S.	1 N.	51	10 Cu. S.	1 N.	48.45	10 S.	1 S. E.	9 p.m.	29.60	62	69	16	River 1 ft.					
8	46	10 S.	1 N.	51	10 Cu. S.	1 N.	48.50	9 S.	1 S. E.	9 p.m.	29.64	62	69	17	River 1 ft.					
9	42	0 Fog.	1 S.	60	1 Cir.	2 S.	52.53	9 S.	0	9 p.m.	29.63	68	76	18	Rain I P.M.	.15 in.				
10	39	10 Fog.	1 S.	59	7 Cir.	3 W.	59.59	9 S.	0	9 p.m.	29.72	79	53	19	Rain I P.M.	.15 in.				
11	34	10 S.	1 S.	64	7 Cir. S.	2 N.	54.56	9 S.	0	9 p.m.	29.50	72	53	20	Rain fall last night.	.26 in.				
12	34	10 Cir. F.	1 S.	66	7 Cir. S.	3 S.	54.56	8 Cu. S.	1 S.	9 p.m.	29.50	72	53	21	Rain fall last night.	.06 in.				
13	33	10 Cir. S. R.	1 S.	66	7 Cir. S.	2 S.	67.66	9 Cir. S.	0	9 p.m.	29.47	79	45	22	Minimum temp're last night 28°;					
14	60	4 Cu. S.	2 S.	51	10 Nim. R.	2 S.	51.60	9 Cir. S.	0	9 p.m.	29.47	79	39	23	River 1 ft.					
15	49	4 Cu. S.	2 S.	48	7 Cir. S.	3 S.	51.60	9 Cir. S.	4 N.	9 p.m.	29.25	76	72	24	Minimum temp're last night 33°.					
16	31	0	2 N.	43	0	N.E.	39.41	9 Cir. S.	3 N.	9 p.m.	29.74	79	75	25	Rain fall up to noon.	.35 in.				
17	27	0	1 E.	52	1 Cir. S.	2 N.	34.39	9 Cir. S.	0	9 p.m.	29.96	65	79	26	Sprinkle of rain 3 A.M.					
18	30	0	3 S.	53	1 Cir. S.	3 S.	49.39	10 Cu. S.	1 S.	9 p.m.	29.93	80	85	27	Rain since 2 P.M.; continuing at					
19	53	10 Cu. S.	3 S.	56	9 Cir. S.	3 S.	51.49	10 Cu. S.	3 S.	9 p.m.	29.85	76	80	28	9 P.M.					
20	57	10 Cu. S.	3 S.	56	9 Cir. S.	3 S.	59.63	8 Cir. S.	0	9 p.m.	29.63	68	73	29	Rain of yesterday and last night.	.54 in.				
21	37	8 Cu. S.	3 N.	42	10 Cir. S.	4 N.	42.48	10 Cir. S.	4 N.	9 p.m.	29.73	79	55	30	Rain from 9 last night to noon					
22	41	10 S. R.	3 N.	48	2 Cir. S.	2 W.	44.43	10 S. R.	1 S.	9 p.m.	29.64	66	79	31	to-day.	.11 in.				
23	9	3 N. E.	4 S.	48	10 S. R.	2 W.	45.44	10 S. R.	1 S.	9 p.m.	29.66	66	79	32	Rain last night to 7 A.M.	.44 in.				
24	39	3 N. E.	4 S.	56	0	3 N.	37.40	10 S. R.	1 S.	9 p.m.	29.67	65	66	33	Rain since 1 P.M.	.46 in.				
25	34	3 C. S.	1 S. E.	45	10 Nimb.	0	45.43	0	0	9 p.m.	29.54	65	66	34	Rain last night.	.90 in.				
26	42	no Nimb.	0	49	9 Nimb.	0	48.46	10 Nimb.	0	9 p.m.	29.50	66	66	35	Rain last night.	.22 in.				
																			3-43 in.	
																			Total rain fall Average Temp. 49°.	

Meteorological Observations taken at Wilkes-Barre, Pa., for November, 1883, by E. L. Dana.

THERMOMETER.												BAROMETER.												REMARKS.					
Day.						7 A. M.						2 P. M.						9 P. M.						At. T. ^h					
1	49	8 Cir. S.	2 S. N.	W.	48	8 Cir. S.	3 W. N. W.	3 S. N. W.	3 S. N. W.	2 S. N. W.	2 S. N. W.	29-20	66	29-25	64	29-25	64	29-20	66	29-25	64	29-25	64	7th. Rain last night . . . . .	.07 in.			
2	33	4 Cu.	2 S.	S.	49	1 Cir.	1 Cir.	3 S. Cu.	3 S. Cu.	3 S. Cu.	2 S. Cu.	29-35	64	29-30	62	29-35	64	29-35	64	29-35	64	29-35	64	Rain last evening . . . . .	.31 in.			
3	36	10 S.	3 S.	S.	36	9 Cir. S.	2 S.	1 S.	1 S.	1 S.	1 S.	29-55	72	29-55	72	29-55	72	29-55	72	29-55	72	29-55	72	Rain at 6 P. M. . . . .	.37 in.			
4	53	4 Cir. S.	3 N.	S.	54	0 Fog.	1 S.	6 S.	8 Cu. S.	3 N.	2 S.	29-68	72	29-65	78	29-68	72	29-68	72	29-68	72	29-68	72	Rain last night . . . . .	.01 in.			
5	40	3 Cir. S.	3 N.	S.	48	3 Cu. S.	3 N.	48	3 Cu. S.	3 N.	40	29-40	79	29-40	69	29-40	78	29-40	79	29-40	78	29-40	78	Rain at 9 P. M. . . . .	.01 in.			
6	31	5 C. S.	2 S.	S.	68	4 Cir. S.	2 S. W.	68	4 Cir. S.	2 S. W.	68	29-30	78	29-30	78	29-30	78	29-30	78	29-30	78	29-30	78	Rain at 7 A. M. ground partly covered . . . . .	.01 in.			
7	46	10 Cu. S.	9	S.	46	10 Cu. S.	1 S.	54	10 S. R.	1 S.	54	29-29	77	29-29	77	29-29	77	29-29	77	29-29	77	29-29	77	Rain last night . . . . .	.06 in.			
8	49	10 S.	11	S.	49	10 S.	1 N.	59	10 Cir. S.	1 N.	59	29-30	77	29-30	77	29-30	77	29-30	77	29-30	77	29-30	77	Rain last night . . . . .	.06 in.			
9	32	5 Cu. S.	10	S.	39	5 Cu. S.	4 N.	41	5 Cu.	5 Cu.	5 Cu.	29-40	73	29-39	74	29-40	73	29-40	73	29-40	73	29-40	73	Rain last night . . . . .	.06 in.			
10	39	10 S.	10	S.	39	10 S.	10	35	10 Cu. N.	3 N.	35	29-36	74	29-35	74	29-36	74	29-36	74	29-36	74	29-36	74	Rain last night . . . . .	.06 in.			
11	44	12 S.	13	S.	44	12 S.	2 W.	37	10 Cu. N.	3 N.	35	29-36	75	29-35	75	29-36	75	29-36	75	29-36	75	29-36	75	Rain last night . . . . .	.06 in.			
12	56	21	15	S.	56	9 Cir. S.	1 E.	36	9 Cir. S.	3 S.	30	29	74	72	29	74	29	74	72	29	74	72	29	Rain last night . . . . .	.06 in.			
13	42	21	16	S.	42	21	1 E.	26	1 Cu.	1 Cu.	26	29	74	72	29	74	29	74	72	29	74	72	29	Rain last night . . . . .	.06 in.			
14	51	17	17	S.	51	17	1 W.	42	0	2 S. W.	42	0	29-37	72	29-37	72	29-37	72	29-37	72	29-37	72	29-37	72	Rain last night06 in.			
15	21	21	21	S.	21	2 Cir. Cu.	2 W.	59	10 C. S.	2 W.	59	30	73	72	29	73	29	73	72	29	73	29	73	Rain last night . . . . .	.06 in.			
16	28	28	28	S.	28	8 Cu. S.	1 S.	46	10 C. S.	2 W.	46	30	73	72	29	73	29	73	72	29	73	29	73	Rain last night . . . . .	.06 in.			
17	39	39	39	S.	39	3 Cir. S.	1 S.	59	3 C. S.	2 W.	59	30	73	72	29	73	29	73	72	29	73	29	73	Rain last night . . . . .	.06 in.			
18	30	30	30	S.	30	3 C. S.	3 S.	64	10 C. S.	3 S.	64	30	73	72	29	73	29	73	72	29	73	29	73	Rain last night . . . . .	.06 in.			
19	21	54	21	S.	21	8 C. S.	3 S.	21	10 C. S.	3 S.	21	62	60	2 S. R.	4 S.	29	56	73	29	56	73	29	56	Average Temp 42° ₃₀ .	.06 in.				
20	65	8 Cu. S.	70	S.	65	8 Cu. S.	2 W.	65	8 Cu. S.	2 W.	65	61	64	2 S. R.	4 S.	29	35	84	29	35	84	29	35	Total rain fall . . . . .	.157 in.			
21	45	10 S.	51	S.	45	10 S.	1 W.	51	9 Cu. S.	1 N.	51	50	49	2 S. R.	4 S.	29	40	74	29	40	74	29	40	74	Rain fall last night06 in.			
22	52	8 Cu. S.	63	S.	52	8 Cu. S.	2 W.	52	9 Cu. S.	1 N.	52	50	49	2 S. R.	4 S.	29	44	76	29	44	76	29	44	76	Rain fall last night06 in.			
23	45	10 S.	52	S.	45	10 S.	1 W.	52	9 Cu. S.	1 N.	52	50	49	2 S. R.	4 S.	29	44	76	29	44	76	29	44	76	Rain fall last night06 in.			
24	51	10 S.	52	S.	51	10 S.	1 W.	52	9 Cu. S.	1 N.	52	50	49	2 S. R.	4 S.	29	44	76	29	44	76	29	44	76	Rain fall last night06 in.			
25	36	4 Cir.	52	S.	36	4 Cir.	3 E.	52	10 Cu. S.	3 E.	52	45	45	10 Nimb.	2 W.	29	70	74	29	70	74	29	70	74	Rain fall last night06 in.			
26	40	10 S.	37	S.	40	4 Cir.	4 N.	37	0	4 N.	37	0	39	0	1 W.	2 W.	29	75	72	29	75	72	29	75	72	Rain fall last night06 in.		
27	35	4 Cu.	36	S.	35	4 Cu.	4 S.	36	0	2 W.	36	0	29	20	3 S. S.	3 S. S.	29	56	68	29	56	68	29	56	68	Rain fall last night06 in.		
28	32	2 Cir.	36	S.	32	2 Cir.	2 W.	36	0	2 W.	36	0	39	39	3 S. S.	3 S. S.	29	56	67	29	56	67	29	56	67	Rain fall last night06 in.		
29	37	10 C. S.	37	S.	37	2 Cir.	2 W.	37	9 C. S.	2 W.	37	39	39	10 S.	10 S.	29	57	67	29	57	67	29	57	67	Rain fall last night06 in.			

METEOROLOGICAL OBSERVATIONS.

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Meteorological Observations taken at Wilkes-Barre, Pa., for December, 1883, by E. L. Dana.

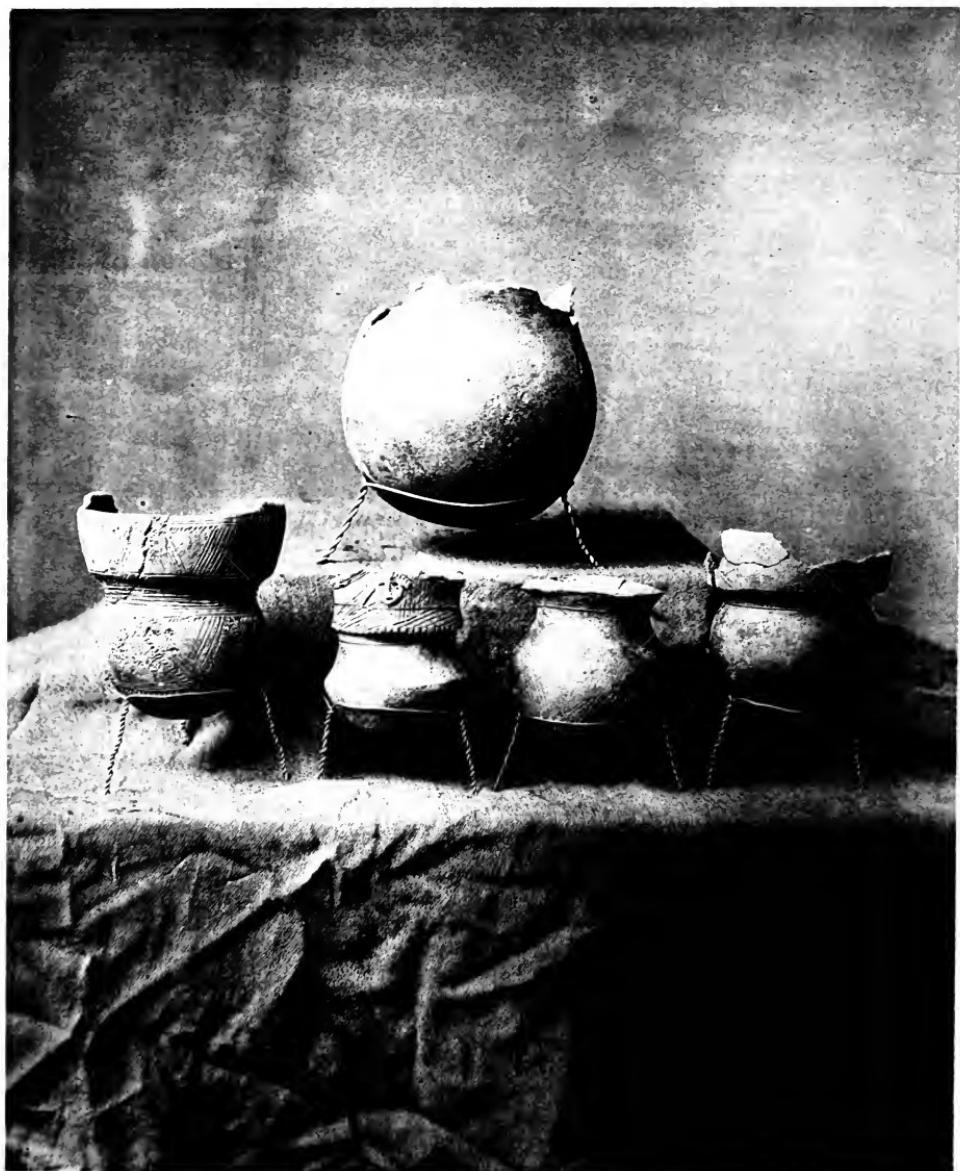
THERMOMETER.		BAROMETER.		REMARKS.	
Day.	Clouds.	Wind.	Clouds.	Wind.	
7 A. M.	8 A. M.	9 A. M.	10 A. M.	1 P. M.	2 P. M.
1 25 0 S.	W.	3 Cir.	2 S. W.	36 34½	5th. Rain at 8.25 last evening and dur-
2 35 4 Cu.	W.	8 Cu. S.	2 W.	31 35½	ing night
3 24 9 Cu.	3 N.	32 0	2 E.	26½	8th. Rain fall. last night and this eve- .
4 18 4 Cir. S.	4 Cir. S.	4 Cir. S.	1 W.	37 33	9th. Rain last night
5 39 2 S.	2 S.	10 Cu. S.	2 W.	43	. or in.
6 38 9 Cu. S.	2 N.	39 4 Cir. S.	2 N.	31 36½	10th. Brilliant colored sunset
7 37 9 Cu. S.	2 N.	45 0	1 S.	39 46½	11th. Rain last night
8 36 2 S.	2 S.	56 10 Cu. S.	2 S.	53 54	.02 in.
9 34 9 Nimb.	2 S.	59 11 Nimb.	2 S.	9 Cu. S.	1 W.
10 33 1 N.	4 Cir. S.	46 7 Cu. S.	2 W.	33 37½	12th. Rain last night
11 32 9 Cu. S.	2 N.	36 8 Nimb.	3 N. E.	36 33½	13th. Rain yesterday and in evening .
12 31 27 4 Cir. S.	2 N.	40 8 Cir. S.	2 S.	36 33½	14th. Slight snow in evening .
13 30 26 3 Cir. S.	2 N.	36 10 Cu. S.	1 N. W.	31 33	15th. Snow ½ in. last night; slight sw. .
14 29 25 9 Cu. S.	2 N.	50 0	1 S.	44 49½	16th. 2 P. M.; melted
15 28 24 9 Cu. S.	2 N.	1 S.	1 S.	35 49½	.05 in.
16 27 23 9 Cu. S.	1 E.	48 10 S.	1 S.	13 14	17th. Snowing at 7 A. M.; at 2 P. M. snow .
17 26 22 9 Cir. S.	1 E.	44 10 Cu. S.	1 E.	28 9 Cir. S.	2 W.
18 25 21 8 Cir. S.	1 E.	43 10 Cu. S.	1 S.	24 3½	.07 in.
19 24 20 8 Cir. S.	1 E.	35 8 Nimb.	1 S.	19 44½	.03 in.
20 23 19 7 Nimb.	2 N.	39 8 Nimb.	1 S.	36 19½	.01 in.
21 22 18 7 Nimb.	2 N.	27 10 Nimb.	2 E.	27 22	.01 S.
22 21 17 8 Cir. S.	1 S.	31 10 Nimb.	1 S.	29 28½	18th. Slight rain in morning .
23 20 16 8 Cir. S.	1 S.	30 10 Nimb.	1 S.	29 28½	.01 S.
24 19 15 8 Cir. S.	1 S.	31 10 Nimb.	1 S.	29 28½	.01 S.
25 18 14 8 Cir. S.	1 S.	32 10 Nimb.	1 S.	29 28½	.01 S.
26 17 13 8 Cir. S.	1 S.	33 10 Nimb.	1 S.	29 28½	.01 S.
27 16 12 8 Cir. S.	1 S.	34 10 Nimb.	1 S.	29 28½	.01 S.
28 15 11 8 Cir. S.	1 S.	35 10 Nimb.	1 S.	29 28½	.01 S.
29 14 10 8 Cir. S.	1 S.	36 10 Nimb.	1 S.	29 28½	.01 S.
30 13 9 8 Cir. S.	1 S.	37 10 Nimb.	1 S.	29 28½	.01 S.
31 12 8 8 Cir. S.	1 S.	38 10 Nimb.	1 S.	29 28½	.01 S.
32 11 7 8 Cir. S.	1 S.	39 10 Nimb.	1 S.	29 28½	.01 S.
33 10 6 8 Cir. S.	1 S.	40 10 Nimb.	1 S.	29 28½	.01 S.
34 9 5 8 Cir. S.	1 S.	41 10 Nimb.	1 S.	29 28½	.01 S.
35 8 4 8 Cir. S.	1 S.	42 10 Nimb.	1 S.	29 28½	.01 S.
36 7 3 8 Cir. S.	1 S.	43 10 Nimb.	1 S.	29 28½	.01 S.
37 6 2 8 Cir. S.	1 S.	44 10 Nimb.	1 S.	29 28½	.01 S.
38 5 1 8 Cir. S.	1 S.	45 10 Nimb.	1 S.	29 28½	.01 S.
39 4 0 8 Cir. S.	1 S.	46 10 Nimb.	1 S.	29 28½	.01 S.
40 3 1 8 Cir. S.	1 S.	47 10 Nimb.	1 S.	29 28½	.01 S.
41 2 0 8 Cir. S.	1 S.	48 10 Nimb.	1 S.	29 28½	.01 S.
42 1 1 8 Cir. S.	1 S.	49 10 Nimb.	1 S.	29 28½	.01 S.
43 0 0 8 Cir. S.	1 S.	50 10 Nimb.	1 S.	29 28½	.01 S.
44 1 1 8 Cir. S.	1 S.	51 10 Nimb.	1 S.	29 28½	.01 S.
45 0 0 8 Cir. S.	1 S.	52 10 Nimb.	1 S.	29 28½	.01 S.
46 1 1 8 Cir. S.	1 S.	53 10 Nimb.	1 S.	29 28½	.01 S.
47 0 0 8 Cir. S.	1 S.	54 10 Nimb.	1 S.	29 28½	.01 S.
48 1 1 8 Cir. S.	1 S.	55 10 Nimb.	1 S.	29 28½	.01 S.
49 0 0 8 Cir. S.	1 S.	56 10 Nimb.	1 S.	29 28½	.01 S.
50 1 1 8 Cir. S.	1 S.	57 10 Nimb.	1 S.	29 28½	.01 S.
51 0 0 8 Cir. S.	1 S.	58 10 Nimb.	1 S.	29 28½	.01 S.
52 1 1 8 Cir. S.	1 S.	59 10 Nimb.	1 S.	29 28½	.01 S.
53 0 0 8 Cir. S.	1 S.	60 10 Nimb.	1 S.	29 28½	.01 S.
54 1 1 8 Cir. S.	1 S.	61 10 Nimb.	1 S.	29 28½	.01 S.
55 0 0 8 Cir. S.	1 S.	62 10 Nimb.	1 S.	29 28½	.01 S.
56 1 1 8 Cir. S.	1 S.	63 10 Nimb.	1 S.	29 28½	.01 S.
57 0 0 8 Cir. S.	1 S.	64 10 Nimb.	1 S.	29 28½	.01 S.
58 1 1 8 Cir. S.	1 S.	65 10 Nimb.	1 S.	29 28½	.01 S.
59 0 0 8 Cir. S.	1 S.	66 10 Nimb.	1 S.	29 28½	.01 S.
60 1 1 8 Cir. S.	1 S.	67 10 Nimb.	1 S.	29 28½	.01 S.
61 0 0 8 Cir. S.	1 S.	68 10 Nimb.	1 S.	29 28½	.01 S.
62 1 1 8 Cir. S.	1 S.	69 10 Nimb.	1 S.	29 28½	.01 S.
63 0 0 8 Cir. S.	1 S.	70 10 Nimb.	1 S.	29 28½	.01 S.
64 1 1 8 Cir. S.	1 S.	71 10 Nimb.	1 S.	29 28½	.01 S.
65 0 0 8 Cir. S.	1 S.	72 10 Nimb.	1 S.	29 28½	.01 S.
66 1 1 8 Cir. S.	1 S.	73 10 Nimb.	1 S.	29 28½	.01 S.
67 0 0 8 Cir. S.	1 S.	74 10 Nimb.	1 S.	29 28½	.01 S.
68 1 1 8 Cir. S.	1 S.	75 10 Nimb.	1 S.	29 28½	.01 S.
69 0 0 8 Cir. S.	1 S.	76 10 Nimb.	1 S.	29 28½	.01 S.
70 1 1 8 Cir. S.	1 S.	77 10 Nimb.	1 S.	29 28½	.01 S.
71 0 0 8 Cir. S.	1 S.	78 10 Nimb.	1 S.	29 28½	.01 S.
72 1 1 8 Cir. S.	1 S.	79 10 Nimb.	1 S.	29 28½	.01 S.
73 0 0 8 Cir. S.	1 S.	80 10 Nimb.	1 S.	29 28½	.01 S.
74 1 1 8 Cir. S.	1 S.	81 10 Nimb.	1 S.	29 28½	.01 S.
75 0 0 8 Cir. S.	1 S.	82 10 Nimb.	1 S.	29 28½	.01 S.
76 1 1 8 Cir. S.	1 S.	83 10 Nimb.	1 S.	29 28½	.01 S.
77 0 0 8 Cir. S.	1 S.	84 10 Nimb.	1 S.	29 28½	.01 S.
78 1 1 8 Cir. S.	1 S.	85 10 Nimb.	1 S.	29 28½	.01 S.
79 0 0 8 Cir. S.	1 S.	86 10 Nimb.	1 S.	29 28½	.01 S.
80 1 1 8 Cir. S.	1 S.	87 10 Nimb.	1 S.	29 28½	.01 S.
81 0 0 8 Cir. S.	1 S.	88 10 Nimb.	1 S.	29 28½	.01 S.
82 1 1 8 Cir. S.	1 S.	89 10 Nimb.	1 S.	29 28½	.01 S.
83 0 0 8 Cir. S.	1 S.	90 10 Nimb.	1 S.	29 28½	.01 S.
84 1 1 8 Cir. S.	1 S.	91 10 Nimb.	1 S.	29 28½	.01 S.
85 0 0 8 Cir. S.	1 S.	92 10 Nimb.	1 S.	29 28½	.01 S.
86 1 1 8 Cir. S.	1 S.	93 10 Nimb.	1 S.	29 28½	.01 S.
87 0 0 8 Cir. S.	1 S.	94 10 Nimb.	1 S.	29 28½	.01 S.
88 1 1 8 Cir. S.	1 S.	95 10 Nimb.	1 S.	29 28½	.01 S.
89 0 0 8 Cir. S.	1 S.	96 10 Nimb.	1 S.	29 28½	.01 S.
90 1 1 8 Cir. S.	1 S.	97 10 Nimb.	1 S.	29 28½	.01 S.
91 0 0 8 Cir. S.	1 S.	98 10 Nimb.	1 S.	29 28½	.01 S.
92 1 1 8 Cir. S.	1 S.	99 10 Nimb.	1 S.	29 28½	.01 S.
93 0 0 8 Cir. S.	1 S.	100 10 Nimb.	1 S.	29 28½	.01 S.
94 1 1 8 Cir. S.	1 S.	101 10 Nimb.	1 S.	29 28½	.01 S.
95 0 0 8 Cir. S.	1 S.	102 10 Nimb.	1 S.	29 28½	.01 S.
96 1 1 8 Cir. S.	1 S.	103 10 Nimb.	1 S.	29 28½	.01 S.
97 0 0 8 Cir. S.	1 S.	104 10 Nimb.	1 S.	29 28½	.01 S.
98 1 1 8 Cir. S.	1 S.	105 10 Nimb.	1 S.	29 28½	.01 S.
99 0 0 8 Cir. S.	1 S.	106 10 Nimb.	1 S.	29 28½	.01 S.
100 1 1 8 Cir. S.	1 S.	107 10 Nimb.	1 S.	29 28½	.01 S.
101 0 0 8 Cir. S.	1 S.	108 10 Nimb.	1 S.	29 28½	.01 S.
102 1 1 8 Cir. S.	1 S.	109 10 Nimb.	1 S.	29 28½	.01 S.
103 0 0 8 Cir. S.	1 S.	110 10 Nimb.	1 S.	29 28½	.01 S.
104 1 1 8 Cir. S.	1 S.	111 10 Nimb.	1 S.	29 28½	.01 S.
105 0 0 8 Cir. S.	1 S.	112 10 Nimb.	1 S.	29 28½	.01 S.
106 1 1 8 Cir. S.	1 S.	113 10 Nimb.	1 S.	29 28½	.01 S.
107 0 0 8 Cir. S.	1 S.	114 10 Nimb.	1 S.	29 28½	.01 S.
108 1 1 8 Cir. S.	1 S.	115 10 Nimb.	1 S.	29 28½	.01 S.
109 0 0 8 Cir. S.	1 S.	116 10 Nimb.	1 S.	29 28½	.01 S.
110 1 1 8 Cir. S.	1 S.	117 10 Nimb.	1 S.	29 28½	.01 S.
111 0 0 8 Cir. S.	1 S.	118 10 Nimb.	1 S.	29 28½	.01 S.
112 1 1 8 Cir. S.	1 S.	119 10 Nimb.	1 S.	29 28½	.01 S.
113 0 0 8 Cir. S.	1 S.	120 10 Nimb.	1 S.	29 28½	.01 S.
114 1 1 8 Cir. S.	1 S.	121 10 Nimb.	1 S.	29 28½	.01 S.
115 0 0 8 Cir. S.	1 S.	122 10 Nimb.	1 S.	29 28½	.01 S.
116 1 1 8 Cir. S.	1 S.	123 10 Nimb.	1 S.	29 28½	.01 S.
117 0 0 8 Cir. S.	1 S.	124 10 Nimb.	1 S.	29 28½	.01 S.
118 1 1 8 Cir. S.	1 S.	125 10 Nimb.	1 S.	29 28½	.01 S.
119 0 0 8 Cir. S.	1 S.	126 10 Nimb.	1 S.	29 28½	.01 S.
120 1 1 8 Cir. S.	1 S.	127 10 Nimb.	1 S.	29 28½	.01 S.
121 0 0 8 Cir. S.	1 S.	128 10 Nimb.	1 S.	29 28½	.01 S.
122 1 1 8 Cir. S.	1 S.	129 10 Nimb.	1 S.	29 28½	.01 S.
123 0 0 8 Cir. S.	1 S.	130 10 Nimb.	1 S.	29 28½	.01 S.
124 1 1 8 Cir. S.	1 S.	131 10 Nimb.	1 S.	29 28½	.01 S.
125 0 0 8 Cir. S.	1 S.	132 10 Nimb.	1 S.	29 28½	.01 S.
126 1 1 8 Cir. S.	1 S.	133 10 Nimb.	1 S.	29 28½	.01 S.
127 0 0 8 Cir. S.	1 S.	134 10 Nimb.	1 S.	29 28½	.01 S.
128 1 1 8 Cir. S.	1 S.	135 10 Nimb.	1 S.	29 28½	.01 S.
129 0 0 8 Cir. S.	1 S.	136 10 Nimb.	1 S.	29 28½	.01 S.
130 1 1 8 Cir. S.	1 S.	137 10 Nimb.	1 S.	29 28½	.01 S.
131 0 0 8 Cir. S.	1 S.	138 10 Nimb.	1 S.	29 28½	.01 S.
132 1 1 8 Cir. S.	1 S.	139 10 Nimb.	1 S.	29 28½	.01 S.
133 0 0 8 Cir. S.	1 S.	140 10 Nimb.	1 S.	29 28½	.01 S.
134 1 1 8 Cir. S.	1 S.	141 10 Nimb.	1 S.	29 28½	.01 S.
135 0 0 8 Cir. S.	1 S.	142 10 Nimb.	1 S.	29 28½	.01 S.
136 1 1 8 Cir. S.	1 S.	143 10 Nimb.	1 S.	29 28½	.01 S.
137 0 0 8 Cir. S.	1 S.	144 10 Nimb.	1 S.	29 28½	.01 S.
138 1 1 8 Cir. S.	1 S.	145 10 Nimb.	1 S.	29 28½	.01 S.
139 0 0 8 Cir. S.	1 S.	146 10 Nimb.	1 S.	29 28½	.01 S.
140 1 1 8 Cir. S.	1 S.	147 10 Nimb.	1 S.	29 28½	.01 S.
141 0 0 8 Cir. S.	1 S.	148 10 Nimb.	1 S.	29 28½	.01 S.
142 1 1 8 Cir. S.	1 S.	149 10 Nimb.	1 S.	29 28½	.01 S.
143 0 0 8 Cir. S.	1 S.	150 10 Nimb.	1 S.	29 28½	.01 S.
144 1 1 8 Cir. S.	1 S.	151 10 Nimb.	1 S.	29 28½	.01 S.
145 0 0 8 Cir. S.	1 S.	152 10 Nimb.	1 S.	29 28½	.01 S.
146 1 1 8 Cir. S.	1 S.	153 10 Nimb.	1 S.	29 28½	.01 S.
147 0 0 8 Cir. S.	1 S.	154 10 Nimb.	1 S.	29 28½	.01 S.
148 1 1 8 Cir. S.	1 S.	155 10 Nimb.	1 S.	29 28½	.01 S.
149 0 0 8 Cir. S.	1 S.	156 10 Nimb.	1 S.	29 28½	.01 S.
150 1 1 8 Cir. S.	1 S.	157 10 Nimb.	1 S.	29 28½	.01 S.
151 0 0 8 Cir. S.	1 S.	158 10 Nimb.	1 S.	29 28½	.01 S.
152 1 1 8 Cir. S.	1 S.	159 10 Nimb.	1 S.	29 28½	.01 S.
153 0 0 8 Cir. S.	1 S.	160 10 Nimb.	1 S.	29 28½	.01 S.
154 1 1 8 Cir. S.	1 S.	161 10 Nimb.	1 S.	29 28½	.01 S.
155 0 0 8 Cir. S.	1 S.	162 10 Nimb.	1 S.	29 28½	.01 S.
156 1 1 8 Cir. S.	1 S.	163 10 Nimb.	1 S.	29 28½	.01 S.
157 0 0 8 Cir. S.	1 S.	164 10 Nimb.	1 S.	29 28½	.01 S.
158 1 1 8 Cir. S.	1 S.	165 10 Nimb.	1 S.	29 28½	.01 S.
159 0 0 8 Cir. S.	1 S.	166 10 Nimb.	1 S.	29 28½	.01 S.
160 1 1 8 Cir. S.	1 S.	167 10 Nimb.	1 S.	29 28½	.01 S.
161 0 0 8 Cir. S.	1 S.	168 10 Nimb.	1 S.	29 28½	.01 S.
162 1 1 8 Cir. S.	1 S.	169 10 Nimb.	1 S.	29 28½	.01 S.
163 0 0 8 Cir. S.	1 S.	170 10 Nimb.	1 S.	29 28½	.01 S.
164 1 1 8 Cir. S.	1 S.	171 10 Nimb.	1 S.	29 28½	.01 S.
165 0 0 8 Cir. S.	1 S.	172 10 Nimb.	1 S.	29 28½	.01 S.
166 1 1 8 Cir. S.	1 S.	173 10 Nimb.	1 S.	29 28½	.01 S.
167 0 0 8 Cir. S.	1 S.	174 10 Nimb.	1 S.	29 28½	.01 S.
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METEOROLOGICAL OBSERVATIONS.

Meteorological Observations taken at Wilkes-Barre, Pa., for January, 1884, by E. L. Dana.

THERMOMETER.											
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REMARKS.											
Day.	7 A.M.	8 A.M.	9 A.M.	10 A.M.	1 P.M.	2 P.M.	3 P.M.	4 P.M.	5 P.M.	6 P.M.	7 A.M.
Clouds.	Wind.	Clouds.	Wind.	Clouds.	Average Temp.	Temp.	Clouds.	Wind.	Clouds.	Wind.	Clouds.
7 A.M.	8 A.M.	9 A.M.	10 A.M.	1 P.M.	2 P.M.	3 P.M.	4 P.M.	5 P.M.	6 P.M.	7 A.M.	8 A.M.
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REPORT OF THE SPECIAL ARCHÆOLOGICAL COMMITTEE ON THE ATHENS LOCALITY.

[Read before the Society, May 4, 1883, by Harrison Wright, Ph. D., Chairman.]

To the President and Members:

At the March meeting a year ago, the attention of the society was called to the fact that almost in our immediate neighborhood were two localities where a number of our archæological specimens had been obtained and where it was supposed a thorough and careful search would result in further additions to our collection—one of these points being near where Bowman's creek flows into the Susquehanna; the other at Athens, where the Chemung and Susquehanna unite their waters. The latter place is on the peninsula between the two rivers, and is still known as Tioga Point. At that time the President appointed two committees, to each of which was assigned the duty of securing permission to dig and to take away such objects as might be found. The necessary permission was obtained, but for various reasons nothing was done in the premises until recently.

Last Fall, in digging a drain to the Susquehanna river, on the lot of Mr. Millard P. Murray, in the town of Athens, the workmen came upon the remains of three Indians, so close together that it was supposed they had been placed side by side in the same grave. The bodies were in a sitting posture, facing the east. It is greatly to be regretted that there was no one present who had sufficient interest in the subject to note the details of the discovery and so direct the work as to secure uninjured the objects of value disclosed by the excavations. The result was that before the arrival upon the ground of Mr. Murray great damage had been done. Of five earthenware pots but one was taken out in

anything like good condition. This was illustrated and described in Publication No. 4 of this society, as the "Murray Pot." The only thing found in it was a small flint arrow-point. Fragments of another pot apparently of the same size and shape, showed, by a lot of red ochre still adhering to them, that the pot had contained a quantity of pigment. Fragments of another one of similar shape and design, though of much larger size, have been preserved. Of another, the frieze, though broken into several pieces, has been cemented together and now, through the kindness of Mr. Murray, is preserved in our collection and is here-with submitted for inspection. A number of fragments saved appear to have belonged to a fifth pot, which, if it had been preserved in its entirety, would be of great value. It was evidently similar in shape to one hereafter described and illustrated as "Tioga Pot No. 1," but on account of its greater size of frieze and bowl there was more space for ornamentation, of which the maker took advantage. Most of the diagonal markings on the fragments resemble those of the "Vermont Pot," figured in Dr. Abbott's work, *Primitive Industry*, fig 158, p. 176, the lines being parallel, sharply marked and close together, while some of the dotted work, though more finished, is not unlike that upon the Irish pot of the bronze age, figured in Donnelly's *Atlantis*, p. 142. Two of these fragments show relief work, which had evidently occupied opposite sides of the frieze and which exhibit more of artistic development than has been generally attributed to the aborigines of the Eastern States: they are two masks or faces about an inch in breadth and something over that in length.

Four celts were found in these graves. The largest appears to be of chert, such as can be had along the Susquehanna river, and is of rude manufacture; a second one, of a green stone, is less rude, though not polished; a third, of serpentine, is considerably polished and a fine specimen;

the fourth is of green stone, probably chloritic schist, highly polished and semi-cylindrical in shape.

There was found also one small, flat discoidal stone, on which there is a rough delineation of what appears to be a single-pronged pick, or it may represent a celt fastened to a handle. The stone is about three inches in diameter and three-fourths of an inch in thickness. At first sight one is inclined to think the marking may have been done accidentally by a plow or some other implement, but a closer examination convinces one that it has been done intentionally and probably not by an iron implement.

A piece of shell found showed unmistakably the *umbo* and teeth of the common clam, the *Venus mercenaria*. A concavo-convex pierced shell gorget was also found. It is about two inches in length by one and a half in width and probably three-fourths of an inch in depth, made from some marine shell, possibly a nautilus, and almost identical with shell georgets worn suspended by a cord around the neck, by two Uncompaghre Ute youths, at the Los Pinos Agency, when seen by the writer in 1879. Some fragments of shells of the common Susquehanna river mussel were also found.

A number of drift-stones of irregular shapes, from five to twenty pounds in weight, were thrown out of these graves. A large flat stone about an inch thick, forming nearly an octagon twenty-two inches in size, which lay over one of the bodies, was evidently used as a dressing stone on which hides of animals had been cleaned, shad scaled, or cakes kneaded, as the center shows long though not hard usage. Two pestles were also found, one of them of large size and very unusual shape.

In order to fix the locality of the subsequent excavations, we will call the one just described "the original grave."

Permission having been given, your Committee, consisting of Mr. Samuel F. Wadhams and the writer, went upon the ground, the 19th of April last, and, after a careful inspec-

tion, began the excavations. For this purpose we employed three laborers and were assisted also in the work by Mr. Murray and his neighbors, Messrs. Collins and Smith, who kindly volunteered their services in this behalf, and to whom our thanks are due.

Our first discovery was a grave about twelve feet north of the original grave. This we will call grave No. 1. By great good luck in our first excavation we came directly upon a skull eighteen inches below the surface of the ground—part of the skeleton of a man above the medium height, buried in a sitting posture. The cranium is shown in the plate at the left. To the left of the skull and in contact with it was a turtle shell, the upper part being perforated with four holes, two in front and two back; and the plastron with four holes, two front and two back, was found, and in it were four small silicious pebbles, about the size and shape of a marrow-fat pea. About two inches to the right of the skull another though smaller turtle shell, similarly perforated, the upper shell having ten holes, two before, two behind and six down the middle; the plastron having seven holes, two before and five behind, was found, and in it were also four small pebbles of about the same size and shape as those found in the shell to the left of the skull. While an examination of these two turtle shells leaves little doubt that they were used for rattles—the perforated holes being made for the purpose of passing thongs through to secure the upper and lower shells together, and possibly also of attaching a handle—yet the question presents itself, might they not also have been the emblem, badge or totem of the tribe. The Lenni Lenape, if I am not in error, even after their subjugation by the Six Nations, claimed to be proprietaries of a portion of the Susquehanna Valley, extending nearly if not quite to Tioga, and one of its tribes was a turtle tribe. Five at least of the Six Nations (as to the Tuscaroras I am not prepared to speak) had each a turtle

tribe, and that they claimed to be proprietaries of Tioga is evinced by the fact that it was included in their sale to the Susquehanna Company, in 1754.

The selection of certain animals as the totem of a tribe, and their use as such antedates any historical data which we have bearing upon the early history of the North American Indians, and an earlier turtle tribe might have existed, from which sprang the turtle tribe of the Lenni Lenape as well as the same tribes of the Six Nations. Certain it is that among the latter the members of this tribe in one nation intermarried with the same tribe of the other nations, and as far as we can learn, the ties between these tribes of the different nations were not solely matrimonial.

Near the second turtle and about three inches to the right of the skull was found a finely wrought discoidal stone; at the feet of the skeleton a number of large, irregular drift stones were seen, similar to those met with in the original grave. In the earth immediately north of the skeleton—and whether a part of the grave was impossible to decide—was found a great quantity of red ochre, fragment of a shell gorget, a broken bone comb, remnants of small shell beads which rapidly disintegrated upon exposure, and a very rude flint arrow-point. A few feet south of the original grave and about the same distance north of this grave were the old stumps of two large apple trees; between these the earth had either been washed or plowed out, as there was a marked depression in the level of the surface at the point where this grave was found, which accounts for its comparatively close proximity to the surface, for the other graves were very much deeper; apparent irregularities of the surface at other points will account for the different depths at which the bodies were found.

Our next discovery was a grave about twenty feet a little south of west from grave No. 1. The skull was reached about two and a half feet from the surface. It was not in

as good condition as the first one found. It is the middle cranium in the group. The body was in sitting posture, facing the east, and had evidently been covered with bark (probably hemlock). To the left of the skull was found the earthenware pot which we will call "Tioga No. 1."

This pot stands four and three-fourths inches in height. Its circumference at the frieze is ten and a half inches, and at the inset below the frieze, nine and a half inches, and at the bowl eleven and one-fourth inches. The mouth of this pot forms an ellipse, the greater diameter being nearly four inches, the less three and one-fourth inches; at either of the end segments on the greater lengths is a mask or face, surmounted by a head-dress, in appearance not unlike the head-dresses of Egyptian soldiers, (*Wilkinson, Vol. I., pp. 290, 300, 301, 331, 334, 391, &c.*), excepting that in this instance, instead of conforming to the shape of the head, it rises to an apex over the face, and both sides stand out stiffly. The line-marking has been done with an arrow-point, and at the base of the frieze the finger-nail has been used. The least height of frieze is one and one-fourth inches; the greatest, directly over the masks, was probably a half an inch higher. The markings around the frieze, in addition to those already mentioned, consist of two parallel lines extending around the rim and eight alternate sets of diagonal and horizontal markings. This pot was probably used as a drinking cup, but when placed in the grave had evidently contained food. The clay has burned black. The only other things found in this grave were a lap-stone and a rude arrow-point of chert, such as is found along this river.

The next discovery was a grave about twelve feet south of the one last mentioned. The body was reached at a depth of nearly three feet. It was in the same position as the other bodies. The bones were decayed, and immediately upon exposure fell to pieces. The occupant of this grave, and the one last described, were not above medium

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height. Nothing of any kind was found with this body.

On a line from this grave to the original grave, and about fourteen feet distant from the latter, the workmen came upon another pot, but unfortunately it was badly broken in digging it out; however, many of the fragments have been preserved, sufficient to give us a general idea of the appearance of the vessel. It was evidently about five inches in diameter, with a two inch frieze of diagonal markings. The clay had burned black.

The next find was a pot twelve feet north of the first grave opened by us. This we will call "Tioga No. 2," (*see plate*). It stands five and one-fourth inches in height. On opposite sides of the frieze, which is about one and three-fourths inches in depth, there are some slight diagonal markings, consisting at both points of six lines, three parallel on a side, converging to a point at the base of the frieze. On the outside of each set of parallels is a row of small circular indentations, such as are seen on the Irish pot of the bronze age, already referred to, though somewhat smaller in size. The greatest circumference of the bowl is thirteen inches, while that of the frieze is about the same, and of the inset below the frieze it is eleven and one-half inches. The diameter at its mouth is four and one-half inches.

Twelve feet north of the point where the last discovery was made, we came upon a double grave, or two separate ones in immediate proximity. The bodies were reached at a depth of something over two feet. The posture was the same as that of those already described. To the left of the one skull lying furthest to the north there was found a pot. We have called it "Tioga No. 3," (*plate*). It stands five inches in height, has no ornamentations save some rude diagonal markings around the bowl. The circumference of the bowl is twelve inches, of the rim ten inches, and of the inset below the rim, nine inches. The mouth is elliptical, its

greater width being four and three-fourths inches, the less four and one-fourth inches. The pot is quite thick and in excellent condition. It was no doubt used as a drinking cup. The clay has burned black.

Between the two skulls was found a large pot, which we have called "Tioga No. 4." It is twenty-one inches in circumference, seven inches in height and five and a half inches in diameter; the frieze is lacking. With it were found the fragments of another pot which was originally of a bright red color. Pieces of the bowl and frieze have been preserved. The marking on the latter is ordinary diagonal work.

Twelve feet west of the grave first discovered by us, a body in sitting posture was reached at a depth of three feet. Many drift stones, such as were found in the original grave and in the first one opened by us, were found here, and the body had, as in the case of the second grave opened by us, been wrapped in bark. To the left of the skull a pot was found, which, for elaborate decoration, surpasses anything we have, and merits a somewhat extended description. We have called it "Tioga No. 5." It is five and a half inches in height, the circumference of the frieze is sixteen inches, of the bowl thirteen and three-fourths inches, and of the inset below the frieze eleven and one-half inches. There are two offsets or projections in the edge of the rim, directly opposite to one another; they are about one-fourth of an inch above the rim, an inch in length, and are marked at right angles to their length by seven indented lines each. These indentations extend to the face of the frieze, and below them are two horizontal and parallel lines the length of the offset, and below these lines are seven triangular indentations made with the point of an arrow-head. Thus far the markings under both offsets are identical. Here they differ. Under one, the seven indentations form the base of a triangle, the apex of which rests on the base of the frieze.

The other sides of the triangle are formed of nine similar indentations. On the outside of the two sides of the triangle are five lines parallel with the sides of the triangle. Under the other offset the seven indentations form one side of a square, the lower side opposite the indentations being a line running around the base of the frieze, the other two sides being formed by eight lines, four running parallel on each side. From the two lower corners of this square rises a pyramid of seven lines, four on one side and three on the other, the apex resting on the middle one of the seven indentations. Just below the rim are two parallel lines running around the top of the frieze between the offsets. The frieze between the offsets is divided by diagonal lines running from the top to the base of it, into fourteen triangles, seven on a side, the bases of six resting on indentations just below the two parallel lines around the rim, and the bases of eight resting on the line around the bottom of the frieze and under the base line of the frieze, and extending all around is a line of triangular indentations. In the inset are seven parallel lines running completely around the pot; on the lower one rest *the bases of seven* triangles—being indentations as above described, the number in some being seven and in others nine—and *the apexes of seven* other triangles whose bases rest upon three parallel lines; four of the last mentioned triangles are indented on two sides, and three on one side only; the number of the parallel diagonal lines dividing the two sets of triangles vary from four to six. Resting on the three parallel lines which form the bases of one of the sets of triangles just mentioned are the bases of seven other triangles, the apexes of which would, if continued, converge to a center immediately at the bottom point of the pot, had not that space been reserved for another piece of ornamentation, to be described further on. The base and one side each of six of these triangles are indented. The seventh has only the base indented. The four parallel

lines which divide the triangle start directly beneath the apexes of seven of the triangles in the row above. The bottom piece is a rude square formed of eight lines, two on a side. Inside of the lines and running around the square are a number of indentations, apparently intended to have seven on a side. The square is intersected by seven lines, viz: three parallel, ending in two sides of the square, and four parallel, running at right angles to them, ending in the other sides of the square and forming a cross. The clay has burned black.

The next find was a body at a depth of over three feet. The only thing found in this grave was the copper or bronze bracelet which is herewith submitted for your examination. Above this body and partially covering it was another body, a later interment. The only thing found in this latter grave was a fragment of a sea shell, a *chama*.

The next and last discovery was a grave about twelve feet north of the point where pot "Tioga No. 5" was found, and about twelve feet west of where pot "Tioga No. 2" was discovered. Here a body was reached at a depth of over three and one-half feet. It was evidently lying at full length and facing the north. The skull was resting on what had been a pillow of twigs bound tightly together. When discovered they had turned black, and rapidly disintegrated upon exposure. A deep cut in the cranium—which is the one in the right in the group—evidently made by a stone celt, explains how the occupant of this grave came by his death.

Tioga Point (old *Ta-ya-o-ga*), where these discoveries were made, is located at the junction of the Chemung river with the Susquehanna. Lewis H. Morgan, in his "League of the Iroquois," in speaking of the many approaches by trail to this point, says: "These several trails converged upon Tioga and descending the Susquehanna formed the

great southern trail or highway of travel and migration into the south," and, in another place: "The convergence of so many trails upon this point preparatory to a descent upon the South through Pennsylvania and into Virginia, on the west side of the Blue Ridge, rendered it an important and well known locality among the Iroquois."

It was a favorite ground on which to hold treaties. One attended by Tedyuscung was held here in the year 1756. Another was held some years later. General Sullivan, in August, 1779, built his fort directly over the site of this graveyard, and the white man settled here in 1783, the first building being the storehouse of Matthias Hollenback.

We must not forget to note that only four miles north of this point is located that remarkable mound known as "Spanish Hill," which, if it is the work of man, as is generally believed, is one of the most remarkable and stupendous structures of the kind in existence, presenting an area on its top nearly equal in dimensions to that of the base of the largest Egyptian pyramid.

As to the age of the remains found—and this is the first question which has been propounded by inquiring friends—there are as yet so few guides in American archæology that it is impossible to answer definitely. It is certain, to the minds of your committee, that between some of the interments long periods of time must have elapsed, for in one grave we find rude implements which in Europe would be classed as belonging to the beginning of the Neolithic age, and in another grave we find the most highly polished productions of the Stone age. There are two things which show that these graves are very old: First, no sign of any iron implement, or fragment of one, was found in the thirteen graves examined. Now, it is known that iron implements came down from the French trading posts over three hundred years ago. Professor Guss, in an article on the early Indian history on the Susquehanna, (Historical Reg-

ister, Vol. I., p. 115 *et seq.*), says: "It is also an interesting fact that Indian goods, such as hatchets, were in possession of the Susquehannocks at the head of the bay, in 1608, which Captain Smith says he understood them to have received by trade from the French in Canada; and they had these implements of European manufacture in such quantities that they shared some of them with their neighbors the Tockwocks." If they were so plenty at the head of the Chesapeake, how much more plenty must they have been two hundred miles nearer their source, and how much earlier must they have reached Tioga than they did the Chesapeake? If, therefore, iron implements were plenty at Tioga three hundred years ago, and in the graves which seem to have been the receptacles of the treasures of the deceased we find no iron implements, there would be reason to believe that these graves are at least three hundred years old. The second point is, that the bodies or, more properly speaking, the bones, were so fast cemented in the clay or loam that the work of getting them out was very slow and tedious, which shows that the disintegrations of the bodies and the subsequent filling in of the soil to reach the consistency in which it was found must have occupied some very considerable space of time.

In regard to the turtles found in the first grave opened, there is in the Century Magazine for the present month (p. 45 *et seq.*), in an article by Frank Cushing, a description of a curious custom of the Zuni Indians in bringing turtles from "the home of our others." He says: "The shell, carefully scraped and dried, was made into a dance rattle, and covered by a piece of buck-skin; it still hangs from the smoke-stained rafters of my brother's house." We are assured by our President, Dr. Ingham, that a calabash rattle was a badge of authority among the Lippan, Tonkaway, and Caronquaway Indians in Texas in 1839. They were constantly used by the mounted guards throughout the

night on a buffalo hunt beyond the then frontier, on Elm creek, an upper branch of the Brazos. This was within the hunting grounds and in dangerous proximity to the Comanches.

The pot named "Tioga No. 5" seems to be a rich field of speculation for the cabalist. The mystic number "7," of which it was said by an old writer that it had a prerogative above all other numbers, appears in the markings so often and in such a varied manner that no one will doubt that it was intentional in the maker. The cross at the bottom might be taken for "the four golden rivers of Eden, long hid." An enthusiast might suggest that the seven lower triangles represented the construction of the earth, the seventh (unfinished) one representing the last and uncompleted day. However, it is not our province to enter at length into these speculations. A close examination of this pot leads one to the belief that it has been copied from another and perhaps older original. This arises from the fact that in the frieze room has not been left for one of the triangles, so that it is cramped considerably out of shape, and the bottom piece is much askew and out of the exact point representing the mathematical center of the pot—two errors which, if the work had been an original design, would hardly have been so flagrant.

One matter worthy of note is, that in the upper part of each of the graves we met with a considerable amount of charcoal. It looked as though, subsequent to burial but before the grave had been entirely filled in, a fire had been built and afterwards slowly smothered out. Whether this was done as a part of the service, or charcoal was thrown into the grave by those standing about, it is impossible to state. We understand that some additional discoveries were made after our departure, but have no satisfactory data upon the subject.

LOCAL SHELL-BEDS.

[Read before the Society, September 14, 1883, by SHELDON REYNOLDS, Esq.]

Among the important remains of the aboriginal inhabitants of the eastern portion of the United States, the shell-heaps, extending along the entire Atlantic Coast, have become objects of interest to archaeologists as affording a means of tracing the identity and social condition of the races formerly occupying the territory.

The examination of many of these heaps has resulted in the discovery of a large number of utensils of domestic use, and other specimens of native industry ; and has disclosed sufficient evidence to prove that these remains are not the result of natural causes as was formerly believed, but are accumulations, formed through long series of years, composed mainly of the shells of the various shell-fish and bones of the several animals used for food by the ancient inhabitants, bearing a close resemblance to the kjoekkenmoeddings of the coast of Norway. The results thus far formulated give reason to expect that further research may help to solve many questions of interest concerning the aborigines.

While the most extensive shell-heaps are found contiguous to the coast, other similar remains, showing the same general formation and yielding like specimens of implements and utensils, are known to exist along the margins of such rivers as produce shell-fish; marking the sites of ancient villages or temporary camping grounds. Several traces of these fresh water shell-heaps are found in this vicinity ; fragments of shells are seen strewn upon the surface of the ground, which have been turned up or scattered by the plow ; pieces of pottery, arrow-heads and other implements are commonly found among them. These surface

indications are met with on Jacob's Plains, near the river, the site of an ancient Indian village; at Forty Fort, the site of a Mohigan village; at a point on Kingston Flats, which was probably a temporary camping ground; near Shupp's Eddy, in Plymouth township, and perhaps other places. Nowhere, however, in this locality, had there been discovered, within the knowledge of the writer, any well defined shell-heaps *in situ*, until quite recently. Soon after the subsidence of the ice-flood in the Susquehanna river, in the spring of 1882, the caving off of the face of the bank of the river, at a point near the south-western boundary line of the city, exposed six well defined shell-heaps or beds, which hitherto had been undisturbed, except by the caving of the bank. They are situated on the east bank of the river, on lots numbered one and one of certified Wilkes-Barre and Hanover respectively.

The first or most easterly one was found three feet beneath the surface of the ground, lying in a horizontal position, ranging in thickness from four inches to eighteen inches, about two yards in breadth, and extending into the bank beyond the excavations, which were about six feet, and with no sign of failure at that point. The others are situated, like the first, at the top of the high bank, thirty to fifty yards apart, and beneath the surface from three to five feet. They bear a close resemblance to each other in size, general composition, and the character of the remains found in them. The shells are the fresh-water mussels with a small number of helices, having a slight mixture of earth, sifted through, probably, from the overlying soil. Most of the shells were in a disintegrated condition and crumbled to pieces at the slightest touch; others were in a good state of preservation. Nearly all had lost their outer covering and were bleached. Many specimens were found with the two valves remaining in natural opposition, believed to be of rare occurrence. Some showed a fracture at the edge, indi-

cating the manner in which they had been opened, while others seem to have been subjected to the action of fire. Only one variety of mussels was met with, being the species now found in the river, though not in such abundance as formerly, as would seem from the evidence of these beds. There was a large quantity of broken pottery underlying and mixed through the shells, and a stratum of the same overlying them. Most of it was in a very crumbling condition and so far decayed as to be scarcely distinguishable. Several large fragments were, however, secured. The material of the vessels, as shown in the specimens, is of three varieties : steatite, rudely ornamented by diagonal lines made by a double-pointed instrument; potter's clay mixed with quartz granules; and carbonaceous fire-clay, or shale, with quartz granules intermixed. The latter variety predominated, and was doubtless the product of local ovens or kilns, being of the same material in all probability as the terra-cotta now manufactured in this vicinity from the fire-clay or shale common to the coal-measures of this region. The vessels of this material retained the black color of the shale; the rude ovens in which they were burned not generating heat of sufficient intensity to expel the carbon, they were more durable than those made of potter's clay, and in a better state of preservation. There were several specimens of interest as seeming to indicate the process of manufacture; being composed of carbonaceous shale and potter's clay. The vessels had been formed of the former material, and afterwards a lining and an outer coating of pure clay had been added, whereupon it was subjected to the heat of the kiln. The inner and outer coverings can be separated from the walls of the original vessel by the insertion of a knife blade. The vessel would thus possess the superior strength and durability of the carbonaceous shale, together with a plastic surface susceptible of ornamentation in a greater degree and with more facility than in the other material. These

fragments did in fact bear more elaborate and skillfully executed designs than the others.

In addition to the pottery there were taken from the beds several hammer stones, net sinkers, three flint knives of curious pattern, a few arrow points, a bone awl, flint chippings, stones bearing marks of fire, charcoal, walnut shells, and a number of bones, some quite large, all split and broken. Many utensils and implements hereinafter mentioned were found in the immediate vicinity. The beds were in a compact mass and very cohesive, as though having undergone great pressure, and when the underlying earth was removed portions of them fell in blocks which soon crumbled upon exposure to the air. No evidence of stratification appeared in the beds, and only a small amount of earth was intermixed, not more, it is believed, than would accumulate during the continuous formation of such beds, and possible siftings from the overlying soil. The character of the earth underlying the beds was the same as that surrounding them; the earth above, which in one instance was five feet in depth, showed no signs of stratification and was, with the exception of the soil of the surface, of the same description as the underlying earth.

In close proximity to the sixth bed, are two graves which were disclosed by the caving of the bank; they each contained a skeleton; the position of the bones and the manner of burial were such as to leave no doubt that they were Indian remains. The figures were in a sitting posture, facing the east, the knees drawn closely against the chest. No trace of any textile fabric or other similar covering was discovered, indicating that the bodies had been buried in a nude state; neither were there any ornaments or trinkets found.

Along the face of the bank and the water's edge, and immediately in front of the shell beds, was found a large number of stone implements, most of which had doubtless

slipped from the bank at the level of the beds and been deposited in the places where found by the gradual wearing away of the bank, caused by the action of the frost and the current of the river. Associated with these objects were many fire-stones, cracked and broken by fire. At one point were seen the evidences of a work shop, a mass of flint chippings, many hammer stones or hand hammers, and several unfinished implements. Nearly every stone in the vicinity which was examined bore more or less the marks of use.

The implements found, hereinbefore mentioned, are as follows: Three lap-stones, thirteen hammer-stones, two rubbing-stones, six discoidal-stones, two hoe-blades, two pestles, two unfinished axes, three flint knives, five slate gorgets, fifteen arrow-points, one sinew-dresser, one celt, and twenty-three net sinkers, besides flint chippings, fire-stones, bones, and a quantity of shells.

The excavations were not carried far enough to show the present size of the beds, and even if continued so far would have afforded no means of estimating their former dimensions. These beds have been observed for a number of years by persons living in the neighborhood, and during the time ten yards have disappeared by the caving of the river bank. The encroachment of the river upon its eastern bank has been continuous since the settlement of the Valley; a comparison of a survey of the land at this point, made in 1848, with a survey of 1882, shows that during the interval the encroachment was forty yards. Previous to 1848 the same forces operated with like effect, though perhaps in less degree. Assuming, as we may, that these beds terminated only at the water's edge, there is no doubt that they were, in their entirety, of very considerable dimensions, and that the present remains are but a small part of the original beds.

It is believed that river mussels, in common with other esculent shell fish, were an important article in the food of

the aboriginal inhabitant ; this fact accounts for the existence of the large and numerous shell heaps along the sea coast, as well as those that are found in the river valleys, though other causes may have operated in exceptional cases to produce them. In the localities where the mussels were margaritiferous, they were sought principally on account of the pearls they yielded, which were highly esteemed and extensively used as ornaments by the Indians. Such cases are mentioned by several writers as occurring on the Tennessee river and its tributaries, where many heaps of these shells are found, and was one of the sources whence was derived the abundance of pearls observed by the historian of De Soto's expedition, in possession of the natives. In the present instance, however, there is no reason to believe that the mussels were pearl-bearing. They were doubtless sought solely as an article of food, obtained without much labor, and susceptible of easy preservation.

The quantity of broken pottery and other domestic utensils, the broken and split bones of animals intermixed with the shells, and the well defined outlines of the beds and their relative situation along the bank of the river, present the characteristics of the true kitchen-middens ; and with the additional evidence of the many stone implements found in the immediate vicinity, the fire-stones, and the graves of the dead, lead to the conclusion that the place was the site of a permanent village and not a camping ground or place of temporary resort. The location also adds weight to this conclusion ; the site is upon the extensive and fertile bottom lands, the soil of which was easy of cultivation and very productive even under the superficial and intermittent tillage of the aborigines, and the elevation such as to render the inhabitants free from the dangers of the river floods, except perhaps on very rare occasions, when their retreat to the neighboring foot-hills would have been easy and effected in a short time.

The means of estimating the antiquity of shell heaps, such as the stratification of the soil, the growth of trees thereon, and the presence of bones of extinct animals which sometimes render it possible to ascertain the minimum of time they have existed, are in the present case wanting; nor was there any trace of metal or glass or any implement of European manufacture found. An approximation even to the age of these beds would be perhaps little better than conjecture. The history of the Indian settlements in this valley date from the year 1728; during the time which intervened before the advent of the Connecticut settler a tribe of the Delawares was located about two miles above the site of these beds on the same side of the river; the Shawanese had their abode on the opposite side of the river, about two miles further down the steam; the Nanticokes and the Mohigans inhabited other points in the valley. No settlement is ascribed to this particular place, either by the historian or the tradition of the Indians.

Whether the superincumbent earth was the result of vegetable decomposition, or was deposited by the floods of the river, it would have required a long period of time, and in either case indicate the great age of the underlying shell beds. There was no forest covering this locality at the time of the settlement of the region by the Yankees; it was agricultural land, and apparently had been tilled for many years, so that vegetable mould would have been a great length of time accumulating to the extent of forming from two to five feet of compact earth. If on the other hand it be attributable to the action of the floods of the river it likewise points to as great antiquity. The level of the beds is twenty-one feet above the present low water mark of the river, which guage was established in 1824. There have been no records kept of the fluctuations of the river except in recent years; previously, such floods only as resulted in great damage are remembered, and no sufficient data is

available to determine the progressive increase and frequency of the river's rise; however, it is fair to assume that before the clearing of the vast tracts of woodland situated on the watershed of the river and its tributaries, floods of the magnitude of those now of common occurrence, were then either entirely unknown or rare events. The construction of the dams in the river, and the obstruction to the flow of water caused by the building of bridges, together with the destruction of the forests, have operated to render more frequent the floods in the Susquehanna, and to materially increase the rise at certain points. The rise at a given place does not prove an equal rise at another; the volume of water remaining a fixed quantity, the rapidity of the flow and the capacity of the channel are the material elements which control it. In the present case the site is opposite to a low island which, during high water, would be submerged, thus rendering the channel double its ordinary breadth; and the rapidity of the current is far greater than at the point of the water gauge. These facts would seem sufficient evidence for believing that the locality was seldom, if ever, submerged during the time in question. From either view of the case therefore a considerable antiquity must be ascribed to the remains.

The sites of Indian villages in this valley in no case, so far as they have been examined, exhibit any remains approximating in quantity or character those described. It is true that in many places fragments of pottery and stone implements are found, proving the habitation of the Indian; but showing nothing of the age, permanence or populousness of the settlement. In the present instance, on the other hand, the remains do throw some light upon these questions and indicate a settlement of comparative importance, populous, and existing through a considerable period.

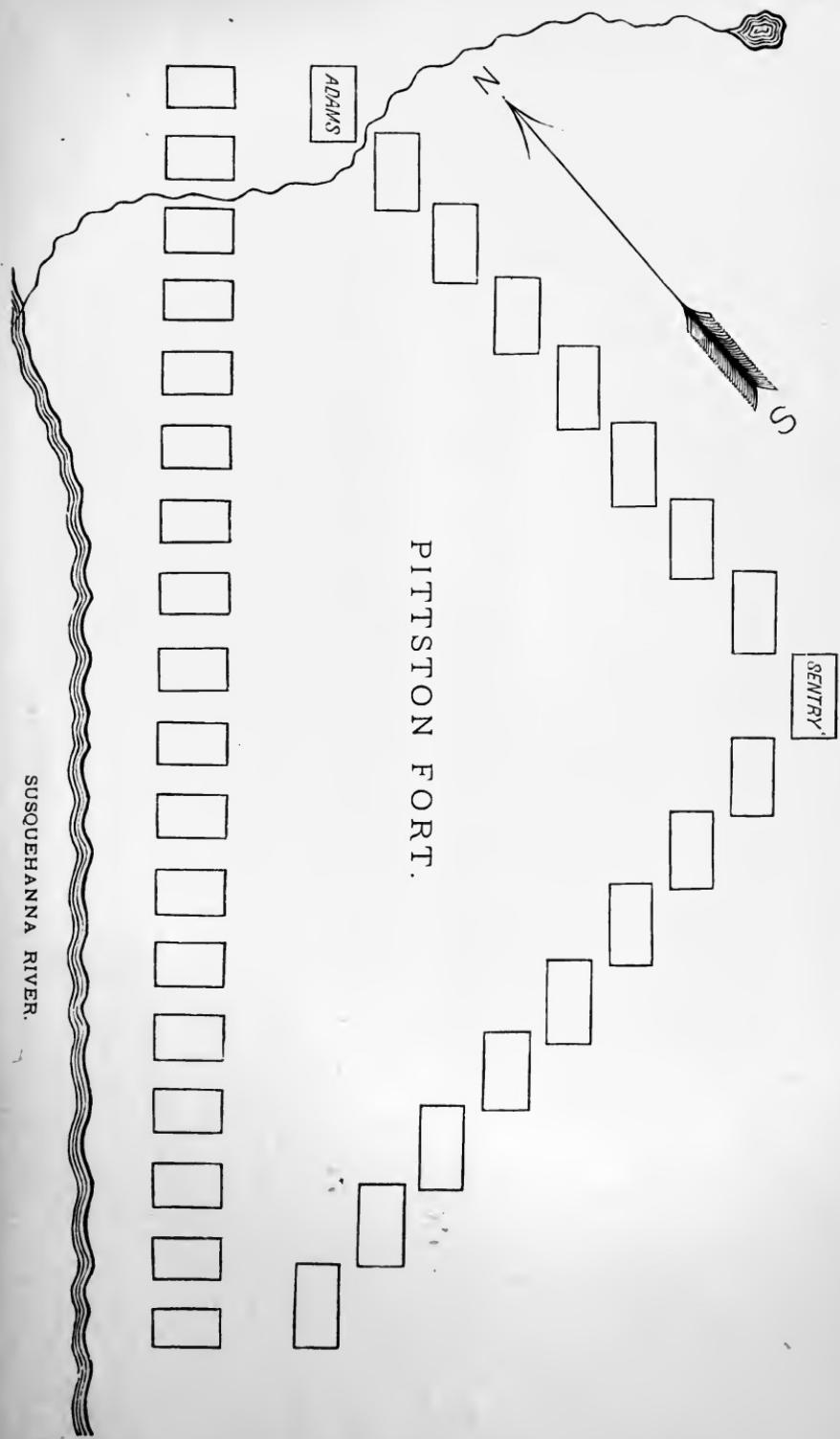
PITTSTON FORT.

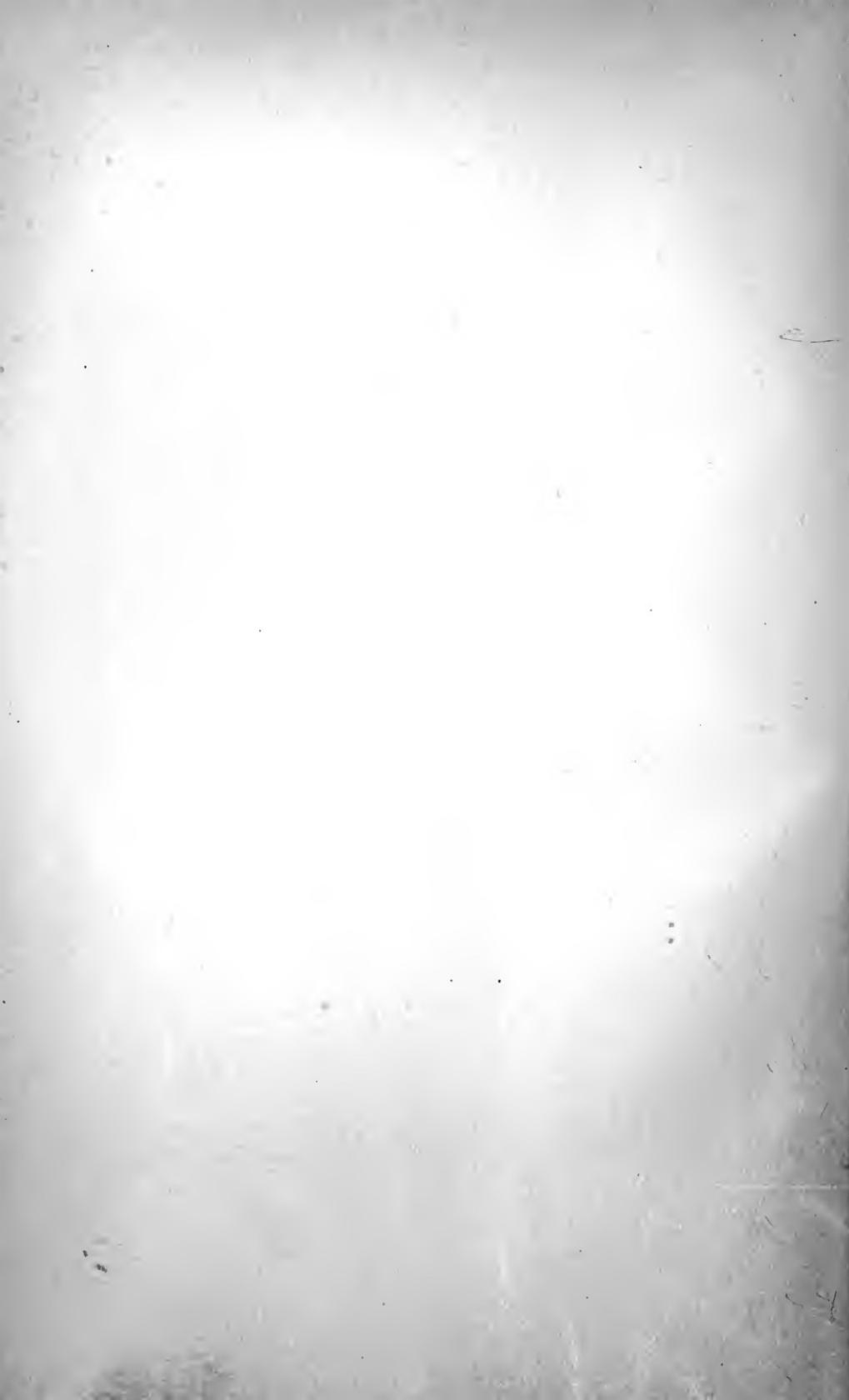
Many of the events connected with the early history of Wyoming have come down to us somewhat obscurely and some few incorrectly. This is owing in part to the fact that nearly all the records and documents which contained information upon the subject were lost or destroyed at the massacre, conflagration and expulsion which took place 3d July, 1778, and again under the Pennamites in 1784. Those who undertook early to write out a history of those events wrote for those whom they supposed knew about as much in reference to the facts as they themselves, and hence they wrote briefly, while those who wrote later, did their work carelessly, and in many points their statements failed to agree with the facts which have been preserved in such shape as to put their correctness beyond question.

The history of the origin of the Pittston Fort is of those events, about which contradictory statements and evidence cluster, and as is usual in all such cases, the errors have been carefully preserved by repetition while the facts have been dropping out one by one from the narration. I propose giving a few facts in my possession to aid in eliminating the full history of this erection.

The description I have found, and which I shall give in this connection, seems to be in the main correct, but it refers the building of the Fort to "early in the year after the battle." The records are conclusive that it was built some years before the battle. It may be, and possibly was, the fact that it was in a measure destroyed at the time of the invasion and devastation in 1778, and when the people returned in the spring following was largely rebuilt by them, and re-occupied at that time. I have not been able to find just when this Fort was originally built, but from its form and manner

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of building, I have no doubt the houses which composed it were built in 1771 and 1772, mostly in the latter year,—for the previous year had been taken up in surveying and allotting the lands among the owners and settlers, and in 1772, the work of permanent location and settlement was commenced in earnest. In 1774 the Fort *Lotts* began to be the subjects of deeds and legal process, as will appear by the records I give in connection herewith.

The site of the Fort after its demolition was made a public parade ground, and was used as such for some time. It is now occupied in great part by J. E. Patterson & Co., with a lumber establishment and other buildings. Our fathers had a keen sense of economy running through all their plans. Houses were built so as to be readily converted into forts, and forts were built so as to make comfortable dwelling places.

Jenkins Fort, on the other side of the river from Pittston Fort, was a mere stockade, built around and in connection with the dwelling house of John Jenkins, Esq. The stockade part was constructed of pitch pines from four to six inches in diameter, sharpened at the top, and set four feet in the ground and alongside of each other so as to lap, and were fastened together with pins of wood and stiffened with two rows of these timbers put on horizontally and pinned to the uprights inside, thus stiffening and uniting the whole into a substantial structure.

DESCRIPTION OF PITTSTON FORT.

"Some of the inhabitants that remained, removed from Wilkes-Barre Fort early in the year after the battle, to the upper part of the valley, and fortified themselves by building a garrison of thirty-five houses, standing in the form of a pyramid or triangle, the base of which was formed by the river; each one being placed three feet within the other, on

the upper side, so that the rear of every successive house could be defended from the preceding one. There was a space between the houses which formed the base and those which formed the sides of the pyramid, with a large gateway which was flanked with pickets at each end. The houses on the upper side faced toward the river, and those on the river side faced toward the hill or the enclosed area. Those that were next to the river were constructed so as to guard against an attack from the Indians creeping along the bank. The house at the apex of the triangle was situated on the highest ground and overlooked not only the Fort but the river and surrounding country; on the top of this house was a promenade for sentries. The houses were so constructed as to communicate from the one to the other in the upper story. Along the north corner there was a stream of water from which the inhabitants of the Fort received their supply."

The following paper was probably written to the surveyor of the Pennsylvania Commissioners, who were appointed to certify the owners of lands within the seventeen townships, under the act of 1799:

"PITTSTON FORT PARADE GROUNDS.

"Mr. David Brown, to whom I was referred for information respecting the parade ground in Pittston, says:

'The lot certificated to Jacob Bedford contains a principle part of the parade ground. A small part is included in William Slocum's survey. The lot was laid out for the purpose of a fort in the time of the war, and each proprietor of the township had a privilege of building a house on the grounds. Two rows of houses were accordingly built of logs, one facing the river and the other facing the hill. These served as walls for the Fort and were flanked by pickets at each end. After the war was over these buildings were demolished and the

land remained a common for some time. All the proprietors in the town claimed a proprietorship in this land, which amounted to three or four perches to a right. It was never divided. If Mr. Brown could know who Mr. Key bought of, he could tell where some of their houses stood; but it is not probable that all that Mr. Key bought of had their houses contiguous, and to survey three or four perches to him in separate pieces would be folly. In conversing with the Board of Commissioners, they think it best that the whole limits of the ground be exactly ascertained and a certificate made out to the assignees of Mr. Key for 12-35 of the same undivided.

‘BENJAMIN NEWBERRY.’”

ENDORSED.

‘The land mentioned within is certificated to Jacob Bedford and William Slocum.’

P. W. Sheaffer, Esq., in his list of forts connected with his “Historical Map of Pennsylvania,” published in 1875, calls this Fort Brown, and makes the following statement in reference thereto :

“Fort Brown. Date, 1778. Pittston, Luzerne County.”

Capt. Jeremiah Blanchard commanded at this fort at the time of the Wyoming massacre, 3d July, 1778, and the following, among others, were inmates at the time :

Ishmael Bennett,	David Brown,	Nathan Jones,
Whitaker,	Barnabas Carey,	Isaiah Halstead,
Eleazer West,	J. Campbell,	Richard Halstead,
Richard West,	James Finn,	Ebenezer Marcy,
David Allen,	Isaac Finch,	Francis Phillips,
Stephen Allen,	Benjamin Jones,	David Sanford.

TRANSFERS OF FORT LOTS.

On ye 8th day of November, Ao. D. 1774, and in ye 15th

year of his Majesties reign, Nathan Denison, Justice of ye Peace, issued an Attachment at the suit of James Babcock against Lovinah Hawkins, wherefore the Plff declares that on ye 10th day of September, 1774, the Defdt Promised the Plff to deliver to him ye possession of one certain House in ye Fort at Pittstown in ye possession of William Williams, and also to give a lawful rite to ye same, but the Defdt not regarding hath never performed, &c., to ye damage of ye Plff £2, &c.

- Westmoreland, Nov. 10, Ao. Di. 1774, attached ye one-half of one certain house in ye Fort at Pittstown.

Test per me. NOAH ADAMS, Constable.

Execution—

LOVINIA HAWKINS } £2 Debt. 7s. 10d., costs.
v. } Z. Butler, J. P. 24 June, 1774.
DANIEL ADAMS.

Westmoreland, Augt. ye 6, 1774. Levied upon a dwelling-house in Pittstown district in ye North East corner of ye Fort, Beginning at ye N. E. corner of House, thence running 18 feet to ye S. E. corner, thence running West 6 feet and one half foot, thence running north 18 feet to ye chimney: thence running east to ye first mentioned bound— Said House appraised by Messrs. Caleb Bates, James Brown, Abraham Harding at 18 dollars—and divided by Mr. John Jenkins. Above-named men were all under oath, and delivered to ye plaintiff in peaceable possession.

Test. TIMOTHY SMITH, Constable.

Execution—

JOSEPH SPRAGUE } Before N. Denison, Justice of ye Peace,
v. } 7th May, 1774.
DANIEL ADAMS.

Westmoreland, Augt. ye 6th, 1774. Levied on the other half of said House, 5 and a half feet by 18. Appraised and

divided by same parties, adding after description—"from ye floor up through to ye roof with privilege of going out at ye Door; and delivered to plff.

Deeds—

SOLOMON STRONG }
to } 23 Sept., 1775. \$19.00.
FRANCIS HOPKINS. }

All the right, title and interest in and to the dwelling house where Isaac Adams now lives, being the N. E. Corner House in the Pittstown Fort, &c.

23 Sept., 1775. £4.—the North West House in Pittstown Fort Containing all the House to Jones' Blacksmith Shop, &c.

Deed—

STEPHEN HARDING }
to } 23 Sept., 1775. £5.
FRANCIS HOPKINS. }

A Lot in Pittstown Fort called Fort Lots. About one acre, Lying adjoining Susquehanna River, being Lot No. 33—North side of Fort.

Deed—

LEMUEL HARDING }
to } 23 Sept., 1775. £8.
FRANCIS HOPKINS. }

Pittstown Fort Lot No. 34, about one acre.

Deed—

CALEB BATES }
to } 5 May, 1764. £10.
FRANCIS HOPKINS. }

Land being in ye survey of old Pittstown, and is five small Lots of land lying and being a little East of ye Fort and South of a highway that runs through said small lots,

which lots is known by ye names of Fort Lots, and contains ye second, third, fourth, with a dwelling house that ye said Hopkins now lives in,—and ye sixth and seventh.

Deed—

OBADIAH MONSON }
to 13 January, 1774. £1.
FRANCIS HOPKINS. }

A certain tract of land in Pittstown being my fort Lot, and is Number ye Fifth.

Deed—

JEREMIAH BLANCHARD }
to 18 April, 1775.
ISAAC BALDWIN. }

Pittston Fort Lot No. 35.

Deed—

SOLOMON STRONG }
to 19 Sept., 1776.
ISAAC BALDWIN. }

One acre Lot in Pittston. Easterly on a highway, South-eary on Daniel Allin's Land, Westerly on said Baldwin's Land where his house now stands, Northerly on ye Parade for ye Fort.

Deed—

SOLOMON STRONG }
to 4 Nov., 1776.
ISAAC BALDWIN. }

Lot in the Fort called Pittston. Bounded Westerly and Northerly on a highway, Easterly on ye land of Elijah Sils-bury, where he now lives, and Southerly on Daniel Allin's Land, and is by Estimation about ten acres.

Deed—

SOLOMON STRONG
to
COL. JEREMIAH HOGEBOOM. } 4 Nov., 1776.

One of what is called ye Fort Lots. Bounded Southerly on a highway, Westerly on ye Susquehanna River, North-erly on land of William Williams, Easterly on said Hogeboom's own land, being one acre more or less.

Deed—

NOAH ADAMS, of Windham Co., Conn.,
to
ROGER SEARLE. } 26 Jan'y, 1790.

For several tracts of Land, to wit : "One meadow Lot, in district of Pittston, lying on Lackawannock Great Island, at the mouth of Lackawannock river; or the one-half of said Island,—Also a number of House Lots, lying in said Pittston, and situated on the North Side of a road that leads from Lackawannock Old Fort, Easterly to Lackawannock long falls, and mostly on the East side of a road that runs from said Fort Easterly on the head of the Meadow Lots, to the Lackawannock river, and being Lots Number 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, and the South half of Lot No. —, or the Lot that Rufus Baldwin now lives on."

Caleb Bates, Constant Searle, witnesses.

A list of the inhabitants of the Township of Pittstown,
April 30, 1772.

John Osburn, erased,	Jenks Corey,
Edward Davidson, on Mr. Coleman's right,	Samuel Slaughter,
John Depue, erased,	John Frazier, erased,
Obadiah Munson, by Francis Phillips,	Timothy Pierce,
Levi Green, erased,	Richard West, erased,
	Jeremiah Blanchard, by John Depieu,

Isaac Adams,	Amos Beach, erased,
Peter Matthews,	Richard West,
David Brown,	Andrew Hickman,
Daniel St. John,	Samuel Dasburre, erased,
Elijah Silsby,	Abraham Harding, for Isaiah
Stephen Wilcox, by Eason	Halstead,
Wilcox,	Abraham Utter,
James Hadsall,	Stephen Harding,
Richard Woodward,	Caleb Bates, by Francis Hop-
David Sanford,	kins,
Barnabas Carey,	Daniel Allen,
Eleazer Carey, Jun., by John	Francis Phillips, erased,
Carey,	Joseph Fish,
Arthur French,	Daniel Carr,
Solomon Finch, by Lemuel	Jonathan Corey,
Harding,	Aaron Wilder,
Eleazer West,	John Jenkins, erased,
Samuel Stubbs, by Austin	Ebenezer Bacchus,
Hunt,	Stephen Harding, erased,
Ebenezer Marcy, by Isaac	James Bidlack, erased,
Allen,	Anderson Dana,
Caleb Bates, by William Hop-	John Franklin,
kins,	Jeremiah Blanchard,
David Sandford, by Ebenezer	Jeremiah Coleman, erased,
Crandall,	Josesh Sprague, erased,
David Peekoy.	

Those marked erased were probably original owners and had sold out and moved to other localities, or those whose residence was but temporary as in the case of John Jenkins. He was an original proprietor of Kingston township, but sold out his interest there to Elisha Swift, and then in connection with Isaac Tripp, Jonathan Dean and others, laid out Exeter township. He gave possession to Swift 1st April, 1772, and moved to Pittston, where he resided until

he built his house on the opposite side of the river in Exeter. Hence his name gets on the list of inhabitants of Pittstown during April; but when the list is perfected he is an inhabitant of Exeter, and hence his name is erased from the Pittstown list.

STEUBEN JENKINS.

Wyoming, December, 1883.

NOTE.—Since the above article was written the following fact has been discovered:

"The Fort at Pittston was built in 1772. At a meeting of the Proprietors and Settlers, held in Wilkes-Barre, May 20th, 1772, it was voted—

'That ye Proprietors belonging to ye Town of Pittston, have ye Liberty to go into their Town, and there to fortyfie and keep in a Body near together and Guard by themselves until further Notice from this Committee.—*Westmoreland Records.*'

—"Hollister's History of Lackawanna Valley, p. 122."

A BIBLIOGRAPHY OF THE WYOMING VALLEY,
PENNSYLVANIA; BEING A CATALOGUE OF ALL
BOOKS, PAMPHLETS, AND OTHER EPHEMERA IN ANY WAY
RELATING TO ITS HISTORY, WITH BIBLIOGRAPHICAL AND
CRITICAL NOTES, &c.

[Read before the Society, December 14, 1883, by REV. HORACE EDWIN HAYDEN.]

The purpose of this work is to record the full title of every publication, article, or paper, however ephemeral, or wherever printed, that may in any way aid to elucidate the history of events within the limits of that section, known in the early annals of Connecticut and Pennsylvania as the "Town and County of Westmoreland;" more especially to guide the student to a correct knowledge of that controversy of which one event was the far-famed Massacre of Wyoming—an historical fact which, small as it may have been in extent, has been so far-reaching in its results, that it is as familiar to the readers of American History as any occurrence between the incipient action at Lexington, Mass., and the terminant surrender of Cornwallis at Yorktown, Va.; and without which a history of the American Revolution would be naturally incomplete.

The literature of every section comprises two very ephemeral kinds of publications which are often of the utmost value to historical students, viz.: Newspapers and Maps. Everything of this character, bearing on the *history* of the circumscribed section, is herein recorded as far as known. Bibliographical and critical notes are added wherever the subject is susceptible of annotation. Also the prices which many of the publications have brought at the auction sales of large American libraries, are added.

ALEXANDER, GABRIEL. *The Fair Maid of Wyoming. A tale of the War of Independence*, by Gabriel Alexander, Esq., Advocate.

London. Printed and Published by James Stewards, 117 Drury Lane. MDCCXLVI.

AMERICAN ANNUAL REGISTER; or, Historical Memoir of the United States for 1796.

8vo. *Philadelphia. Printed and sold by Bioren & Mador, No. 77 Dock Street. January 19, 1797.*

Pages 91-133 contain Wyoming History.

ARMORY, THOMAS C. *The Military Services and Public Life of Major General John Sullivan, of the American Revolutionary Army. Portrait.*

8vo. cloth, pp. 320. *Boston. Wiggins & Lunt. Albany, N. Y., J. Munsell. 1868.*

BANCROFT, GEORGE. *History of the United States of America, from the Discovery of the Continent.* By George Bancroft. Thoroughly Revised Edition, with Index. Centenary Edition. 6 Vols. 12mo. Cloth, \$13.50; sheep, \$18.00; half calf, \$24.00.

Little, Brown & Co. Boston. 1876.

There are earlier editions of this well known work.

BETROTHED, THE, OF WYOMING. An Historical Tale.

— and must I show

Sweet Wyoming! The day when thou wert doomed
Guiltless to mourn thy loveliest bowers laid low?
When where of yesterday a garden bloom'd,
Death overspread his pall, and blackening ashes gloom'd.
Campbell.

21mo. pp. 231. *Philadelphia. Sold by the Principal Booksellers; and in New York, Boston, Baltimore, and Washington. 1830.*

This romance, founded on the Massacre of Wyoming, takes wondrous liberties with history. It makes John Butler a cousin and protege

of Col. Zebulon Butler; Brandt present at the "Massacre," where he not only takes 1000 scalps, but slays his own father, and is himself killed by the patriots ; and terminates John Butler's career by a stroke from the sword of one of the heroes, which "in its backward sweep nearly dissevered Butler's head from his body," with more of the same sort.

——— Idem. Second Edition.

[BIDDLE, CHARLES.] Autobiography of Charles Biddle, Vice President of the Supreme Executive Council of Pennsylvania. 1745-1821. (Privately printed.)
8vo. pp. xii+423. *Philadelphia. E. Claxton & Co. 1883.*
Pages 207-209, 221-223. Views of one of the Supreme Council on the Wyoming difficulties.

BIDLACK, BENJAMIN ALDEN. Address by B. Alden Bidlack, 22d February, 1839, at Wilkes-Barre, Pa., in vindication of the Patriotism and Military Services of the first Settlers of Wyoming, with a view to correct many errors in the written and unwritten history of the Settlement and Massacre of the Valley. Published in pursuance of the request of a subsequent meeting.

8vo. pp. 16. *Washington. 1842.*

BLACKMAN, EMILY C. History of Susquehanna County, Pennsylvania. From a Period preceding its Settlement to Recent Times, including the Annals and Geography of each Township, with Maps and numerous Illustrations. Also, a Sketch of Woman's Work in the County, for the United States Sanitary Commission ; and a list of the Soldiers of the National Army, furnished by many of the Townships.

8vo. pp. xii+640. *Philadelphia. Claxton, Remsen & Haffelfinger, &c. 1873.*

This work contains two chapters entitled "Westmoreland and the Pennamite Wars," and "The Intrusion Law and its Effect," with a

map of Westmoreland, showing the Connecticut surveys. Published at \$5.00.

BOWEN, ELI. The Pictorial Sketch-book of Pennsylvania, or, its Scenery, Internal Improvements, Resources, and Agriculture, popularly described by Eli Bowen, author of the "U. S. Post Office Guide," and late of the General Post Office. Illustrated with over two hundred engravings, and a colored map.

8vo. pp. 207. *Philadelphia. Wm. Bromwell. 1853.*
Contains 75 pages on Wyoming, and about 120 on the Anthracite Coal Regions.

BRADLEY, ABRAHAM A. A Philosophical Retrospect on the General Outlines of Creation and Providence, wherein is considered the Origin of Matter, and Works of Creation, and also the Immutable and Systematic Dispositions of Divine Providence, in consequence whereof the World was, at some ancient epoch, Destroyed by an Exundation of the Sea; subsequent to which the Creation of all Terrestrial Animals took place. Comprising, also, a general view of the Origin of Nations, and of the general characteristics of the several Vanities of Mankind. By Abraham Bradley, Esq.

12mo. 194+4 (contents.) *Wilkes-Barre, Penn'a. Printed by Charles Miner. 1808.*

[BROWER, ANTHONY P.] The Wyoming Monument. A Poem by the Lu-nat-ic Bard of Wyoming. Respectfully inscribed to the Ladies' Monumental Association.

A good book's an unobtrusive friend,
Which, when consulted, doth sound wisdom speak,
To mend your fortune,—heart and conscience mend,
Truth telling DIE doth useful treasure eke,
Evil companions bad books ofttyme prove,
Soiling the mind we should keep pure and white;
To wicked actions they beguile the love,
Masking the wrong with a false veil of right.

"Ah! who can tell how hard it is to climb
 The steep where Fame's proud temple shines afar?
 Ah! who can tell how many a soul sublime,
 Hath felt the influence of malignant star,
 And waged with fortune an eternal war?"

"Be just and fear not."

12mo. pp. 58. *Wilkes-Barre, Pa. Printed for the Author.* 1841.

The notes in this volume were written by W. C. Gildersleeve.

BUFFALO HISTORICAL SOCIETY. Publications of the Buffalo Historical Society. Volume I. Illustrations and map. 8vo. pp. xxviii.+436. *Buffalo. Published by Bigelow Bros.* 1879.

Contains Major Norris' Journal of Sullivan's expedition of 1779. On page 364 is settled the question as to whether Jos. Brandt was at the Massacre of Wyoming.

BUTLER, STEUBEN. The Literary Visitor. An octavo magazine, published every Friday, beginning July, 1813, and continued for two years.

Wilkes-Barre. 1813—1815.

CAMPBELL, THOMAS, LL. D. Gertrude of Wyoming, and other Poems. (First edition.)

4to., boards. *London. 1809.*

— Ibid. (Second edition.)

— Gertrude of Wyoming. A Pennsylvania Tale, and other Poems, by Thomas Campbell, author of "The Pléasures of Hope," etc. (Second edition.) July, 1809. (First American edition.)

16mo. pp. 132. *Printed and Published by D. Longsworth, Shakespear's Gallery, New York.*

The editions of this poem are numerous.

CENTENNIAL ANNIVERSARY. Order of Exercises for the Centennial Anniversary of the Battle and Massacre of

Wyoming. Exercises July 3d, at the Monument Grounds, Wyoming. Exercises July 4, at Wilkes-Barré. Exercises July 5, at Wilkes-Barré.

8vo. pp. 4. *s. l. s. a. [Wilkes-Barre. 1878.]*

CAPMAN, ISAAC A. A Sketch of the History of Wyoming, by the late Isaac A. Chapman, Esq. To which is added an Appendix, containing a Statistical Account of the Valley and Adjacent Country, by a Gentleman of Wilkes-Barré.

12mo., boards. pp. 209. *Wilkes-Barre, Pa. Printed and Published by Sharp D. Lewis. 1830.*

The appendix to this volume has been ascribed to Hon. David Scott, and Sharp D. Lewis, Esq., of Wilkes-Barré.

Fields, No. 427, \$1.60. Brinley, No. 3363, \$2.25. Boon, No. 2562, 75 cts. Menzies, half calf, No. 371, \$2.50

CAPMAN, C. I. A. Franklin's Oath. A tale of Wyoming one hundred years ago.

"The more we know of History the less we shall esteem the subjects of it; and to despise our species, is the price we must too often pay for our knowledge of it."—*Lacon.*

12mo. pp. 110. *Pittston, Pa. Hart, Printer, Gazette Office. 1880.*

This is a work of fiction, by the son of Isaac A. Chapman, the Historian.

CHASE, H. W. An Account of the Unparalleled Disasters at the Avondale Colliery, Luzerne County, Pa., September 6, 1869, by which One Hundred and Ten Lives were Lost. By H. W. Chase, City Editor *Scranton Morning Republican.* Illustrated.

8vo. pp. 40. *Scranton. J. B. Furman, Publisher. 1869.*

CHRONOLOGY of the Wyoming Valley. 1875.

16mo. pp. 20. *s. l. [Wilkes-Barre,] 1875.*

CLARK, JAMES ALBERT. *The Wyoming Valley, Upper Waters of the Susquehanna, and the Lackawanna Coal Region, including views of the Natural Scenery of Northern Pennsylvania, from the Indian Occupancy to the year 1875. Photographically Illustrated.* [By forty-five photographs.] Edited by J. A. Clark.

Royal 8vo. pp. 236. *Scranton, Pa. J. A. Clark, Publisher. 1875.*

This volume is largely a compilation from the histories of Chapman, Miner, Pearce, Hollister, &c., with a few original biographical sketches. It was first published by subscription, to be issued in 15 parts, at 50 cents a part. But only about 10 parts were issued, when the work ceased, and about 100 copies were bound as above. Published, with 25 photographs, \$5.00; with 14 photographs, \$3.50.

— *Historical, Geological, and Industrial Sketches of the Scranton and adjacent Coal Fields, embracing the Coal Properties of the Wyoming and Lackawanna Valleys. Including the Early History of Wyoming from the Indian Occupancy to the Present Time; the Historical Incidents of the Massacre and Border Struggles, Disputing, by Proof, the Supposition that Brandt, the Great War-Chief of the Six Nations, was Present at the Wyoming Massacre; the Pennamite War; Coal—its Origin and Formation as now understood by Geologists; the Different Theories and Notices, including the Drift Theory; the Peat-bog or Marsh Theory; the Marine Theory; the Petroleum Theory; the Mineral Theory; the Volcanic Theory; Colliery, including Practical Mining; Statistics of the Trade; Incidents in and around Coal Mines; Industrial Sketches of the City of Scranton—its Rapid Growth from a Wilderness, in 1840, to the Third City of Pennsylvania; with Many Notes of Importance to the Stranger and the Tourist.* By James Albert Clark, a Member of the Scranton Bar; Author and Publisher of "The Wyoming Valley, Upper Waters of

the Susquehanna, and the Lackawanna Coal Region." Illustrated cover title.

Large 8vo. pp. 58.

s. l. s. a.

This title, which is the longest in the "Bibliographies of Wyoming," covers eight chapters, slightly condensed from the work by Mr. Clark above, published at "Price, 50 cents," with an impossible representation of the Massacre of Wyoming.

CONYNGHAM, HON. JOHN N., LL.D. Address of the late Hon. John N. Conyngham, of Wilkes-Barré, Delivered on the 24th of June, 1851, at the Celebration of "St. John's Lodge," of Ancient York Masons, Pittston, Pa.

8vo. pp. 8. *Pittston. Richart and Phillips, Printers. 1851.*

— Address delivered by Hon. John N. Conyngham, on the occasion of Laying of the Corner-Stone of the New Court House, Wilkes-Barré, Pa., August 12, 1856.

8vo. pp. 14. *Wilkes-Barre. Printed at the Office of the Record of the Times. 1856.*

— Address delivered on the occasion of Laying the Corner-Stone of the Luzerne County Prison at Wilkes-Barré, Pa., September 9, 1868, together with the Masonic Ceremonies.

8vo. pp. 13. *Robert Baur, Printer, 104 Main St., Wilkes-Barre, Pa. 1868.*

COPPEÉ, HENRY, LL.D. Beautiful Wyoming. A Poem for the Celebration of the Hundredth Anniversary of the Battle, Massacre and Flight, 1778. July 3, 1878. [Rubricated title.]

"Ignorant populi, si non in morte probaris
An scieris adversa pati."—*Lucan's Pharsalia, viii., 626.*

Nos patriæ fines, et dulcia linquimus arva.—*Virgil Ecl., 1, 5.*

12mo. pp. 24. *Philadelphia. Claxton, Remsen & Haffel-finger, &c., 624-6-8 Market St. 1878.*

A poem read by Dr. C. at the Centennial of the Wyoming Massacre, July 3, 1878.

CRAFT, REV. DAVID. Historical Discourse of the Wyalusing Presbyterian Church. Delivered September 5, 1865. By the Pastor, Rev. D. Craft. Published at the Request of the Congregation. Illustrated.

8vo. pp. 127+1. *Towanda, Penn'a. Printed at the "Bradford Reporter" Office.* 1870.

The discourse occupies 37 pages of the work—the balance being a general history of Wyalusing from 1763 to 1870. Many of the early settlers of Wyalusing (Bradford county), had been early settlers also in the Wyoming Valley.

— 1770. History of Bradford County, Pennsylvania, with Illustrations, and Biographical Sketches of some of its Prominent Men and Pioneers. 190 illustrations and maps.

4to., gilt, pp. 492+ix. *Published by L. H. Everts & Co., 714-19 Filbert St., Philadelphia.* 1878.

The history of Bradford county is also a part of the history of the "Susquehanna Title." Published at \$12.00.

— Sullivan's Centennial Historical Addresses. Illus'd. 8vo. pp. 41. *s. l. s. a.*

A republication from newspapers of Dr. Craft's valuable Historical Addresses, delivered in 1879, at Elmira, Waterloo, and Geneva, N. Y.

DAWSON, HENRY B. Battles of the United States, by Sea and Land, embracing those of the Revolutionary and Indian Wars, the War of 1812, and the Mexican War; with Official Documents, and Biographies of the most distinguished Military and Naval Commanders. By Henry B. Dawson, Member of the New York Historical Society, &c. Illustrated with numerous highly finished Steel Engravings, including Battle Scenes, and full length Portraits from Original Paintings by Alonzo Chappel.

4to. 2 vols., pp. 746+530. *New York. Johnson Fry & Company.* 1858.

The Wyoming Massacre is reported in full, with contemporary authorities, pp. 418-431.

DAY, SHERMAN. Historical Collections of the State of Pennsylvania, containing a copious selection of the most interesting Facts, Traditions, Biographical Sketches, Anecdotes, &c., relating to its History and Antiquities, both General and Local, &c. Illustrated.

8vo. pp. 708. *Philadelphia. 1843.*

The articles on the several counties included in the Connecticut claim cover many pages. Cincinnati and New York, \$5.00.

DORRANCE, REV. JOHN, D. D. A Sermon on the Death of the Hon. Chester Butler. Delivered in the Presbyterian Church at Wilkes-Barré, October 13, 1850.

8vo. pp. 12. *s. l. s. a.*

EGLÉ, WM. H., M. D. An Illustrated History of the Commonwealth of Pennsylvania, Civil, Political, and Military, from its Earliest Settlement to the Present Time, including Historical Descriptions of each County in the State, their Towns, and Industrial Resources. Over 300 Illustrations.

8vo. pp. 1184. *Harrisburg. 1876.*

Contains a history of Luzerne and other counties included in the Connecticut claim. A second edition issued in 1885 at \$5.00.

EMORY, REV. B. B. Life, Trial, and Confession of Rees W. Evans; tried and convicted for the murder of Louis Reese, at the April Session of the Luzerne County Court, held at Wilkes-Barré, Pennsylvania. By Rev. B. B. Emory, with an Appendix by Rev. George Peck, D. D. Portrait.

8vo. pp. 48. *Wilkes-Barre. Printed at the Office of the Times. 1853.*

FRANKLIN, ROSWELL. Historical Sketch of Roswell Franklin and Family, drawn up at the request of Stephen Franklin, by Robert Hubbard.

16mo. pp. 103. *Danville, N. Y. Printed by A. Stephens. 1839.*

GORDON, JAMES A. Historical Sketches of the Old Borough of Wilkes-Barré. 1879,

A series of interesting newspaper articles, containing reminiscences of the early times and persons in the Valley, published in 14 numbers in the *Weekly Union Leader*.

GORDON, LIZZIE. Among the Flowers. A Poem, to which is added a Selection of Wyoming Poetry, by Native Writers of Luzerne County.

8vo. pp. 43. *Wilkes-Barre. The Leader Company.* 1879.

The author was a daughter of James A. Gordon, Esq., and an invalid of years standing from rheumatic complaints, which deprived her of the use of every limb. Her poems are written from dictation, and, as the work of one who had, from sickness, been deprived of so many opportunities for mental culture, they display considerable intelligence.

HAKES, HARRY, M. D. Wyoming. Synopsis of the Battle and Massacre, for the Information of the People.

4to pp. 4. *s. l. s. a. [Wilkes-Barre. 1878.]*

HARPER'S MAGAZINE.

1853. Vol. VIII, p. 613. The Susquehanna River. 11 pages. Illustrated, by T. Addison Richards.

1858. Vol. XVII, p. 306. Romance of Wyoming. 26 pages. Illustrated, by A. H. Guernsey.

1863. Vol. XXVII, p. 455. Pennsylvania Coal Region. 11 pages. Illustrated, by H. W. Alden.

HAZARD, SAMUEL. Pennsylvania Archives. Selected and arranged from original documents in the office of the Secretary of the Commonwealth, conformably to Acts of the General Assembly, February 15, 1851, and March 1, 1852, commencing 1664. Illustrations of Maps.

8vo. 12 vols. *Philadelphia. 1852-1856.*

Vide "Pennsylvania Archives" and "General Index." These volumes cover the period from 1664 to 1790.

— General Index to the Colonial Records in 16 vols.,

and to the Pennsylvania Archives in 12 vols. Published and arranged by S. H—d under the Act of the General Assembly of Pennsylvania.

8vo. pp. 683. *Philadelphia. 1860.*

Vide "Hazard, Samuel," and "Pennsylvania Archives."

— The Register of Pennsylvania. Devoted to the Preservation of Facts and Documents, and every other kind of useful information respecting the State of Pennsylvania.

Large 8vo. 15 vols. *Philadelphia. Printed by W. F. Geddis.*

Vol. V. Notes on Luzerne County, by Chapman, p. 33-35.

Vol. VI. Luzerne Anthracite Coal Region, p. 113-116.

" Account of the Massacre and Defeat of the Indians by General Sullivan, by Chapman, p. 58-60.

" Verses on same, pp. 61, 202.

" Wyoming and Lackawanna Coal Region, Silliman, p. 70-77.

" Sketch of the Causes of the Contentions at Wyoming, by Chapman, p. 310-313.

" Coal Mines described, by Miner, p. 310.

" Description of Luzerne County, by Chapman, p. 97-104.

HISTORICAL MAGAZINE, and Notes and Queries concerning the Antiquities, History and Biography of America.

4to. and 8vo. 23 vols. *Boston and New York, 1857 to 1873.*

Vol. II. Spencer and Lossing on the Massacre of Wyoming, p. 127-128.

" Troops at Wyoming, 1778, pp. 163, 251.

" Grant's Journal of Sullivan's Expedition to the Genesee country, 1779, p. 233-273.

Vol. V. Sullivan's Expedition, p. 235-330.

Vol. X. Sullivan—Vindication of his Character as a Soldier and a Patriot, by T. C. Amory, p. 161-177 Supp.

Vol. XI. Sullivan's Instructions in 1779, p. 139-140.

Vol. XII. Sullivan's Expedition against the Five Nations, 1779; History of, by Nathan Doris, p. 198-205..

Vol. XIV. Sullivan's Campaign, Documents relating to, p. 144.

Field, No. 986, \$39, 13 vols., cloth. Menzies, No. 932, \$100, 16 vols., half morocco. Cincinnati and New York, 23 vols., \$60.

- HOLLISTER, HORACE, M. D. Contributions to the History of the Lackawanna Valley. Portrait.
12mo. pp. 328. *New York.* *W.H. Truson & Co.* 1857.
- HISTORY of the Lackawanna Valley, with illustrations. Second edition. Entirely rewritten.
8vo. pp. 442. *Scranton, Pa.* *Published by M. Norton, Bookseller and Stationer.* 1875.
- Ibid. "Third edition." Same as second edition.
- HUBBARD, JOHN N., A. B. Sketches of Border Adventures in the Life and Times of Major Moses VanCampen, a surviving soldier of the Revolution. By his Grandson.
8vo. pp. 310. *Bath, N. Y.* *R. L. Underhill & Co.* 1842.
Van Campen was in the Battle of Wyoming, and accompanied Sullivan in 1779.
Field, No. 1042, \$3.50. Menzies, No. 989, half mor., gilt top, 4 illustrations inserted, \$3.50.
- JENKINS, STEUBEN. Historical Address at the Wyoming Monument, 3d of July, 1878, on the One Hundredth Anniversary of the Battle and Massacre of Wyoming. Portrait of Author.
8vo. pp. 71. *Wilkes-Barre, Pa.* *Printed by Robert Baur.* 1878.
- JESSUP, HON. WILLIAM. An Address delivered at the Sixth Anniversary of Wyoming Seminary, Kingston, Pa., July 17, 1850.
8vo. pp. 16. *New York.* *Kneeland, Printer.* 1850.
- JOHNSON, C. BEN. The Germans of Luzerne. Historical Reminiscences. Recollections of Old People. The German-American—Martially, Religiously, Politically and Socially.
This is a newspaper article of length, printed in the *Fest Ausgabe Deutsch-Amerikanische Volks-Freund*, Wilkes-Barre, Pa., 26 July, 1881.

—The Miner Wounded; an Appeal in Behalf of the Wilkes-Barre City Hospital. Reprint from the *Daily Union-Leader*.

8vo. pp. 3. *Union-Leader Print. Wilkes-Barre.* 1881.

— Sketch of the Wyoming Historical and Geological Society of Wilkes-Barre. Reprinted from the *Sunday News-Dealer*, Christmas Edition, 1880.

JOHNSON, WESLEY. Wyoming. A Record of the One Hundredth Year Commemorative Observance of the Battle and Massacre, July 3, 1778—July 3, 1878. “An honest tale speeds best when plainly told.” Edited by Wesley Johnson, Esq., Secretary of the Association. Portraits and Illustrations.

8vo. pp. 344+xi. *Wilkes-Barre, Pa. Beardslee & Co., Printers.* 1882.

Ed. 700 copies published at \$2.50.

JUDSON, L. CARROLL. The Sages and Heroes of the American Revolution. In two parts, including the Signers of the Declaration of Independence. Two hundred and forty-three of the Sages and Heroes are presented in due form, and many others are named incidentally, by L. Carroll Judson, author of a Biography of the Signers of the Declaration of Independence, Moral Probe, et cet., et cet. Illustrations.

8vo. pp. 480. *Boston.* 1875.

Contains Biographical Sketches of Col. Zebulon Butler, Eliphalet Dyer and Gen. John Sullivan.

KITCHEN, LT. COL. D. C. Record of the Wyoming Artillerists.

16mo. pp. 89, *Tunkhannock, Pa. Alvin Day, Printer.* 1874.

Edition of 250 copies.

KULP, GEO. B. A Digest of Titles of Local Laws passed by the Legislature of Pennsylvania; Titles of Corporations chartered by the same authority, also by the Courts and under the Mining and Manufacturing Laws of Pennsylvania, for the County of Luzerne, between the years 1700 and 1874, inclusive; giving the dates of Acts of Incorporation and of the passage of Local Laws, with the several Supplements thereto, with a reference to the pages of the Pamphlet Laws, Deed Books, Mining and Manufacturing Books, and other books where they may be found. By George B. Kulp, a member of the Luzerne Bar.

8vo. pp. 112.

Wilkes-Barre, Pa. 1874.

— The *Luzerne Legal Register*. A weekly publication, devoted to Law and Business. Published every Friday.

8vo. 14 vols. *Wilkes-Barre, Pa. Record of the Times, and E. B. Yordy.* 1872-1885.

— Sketch of the Life and Character of George W. Woodward, together with the proceedings of the Supreme Court and several of the Bar Meetings, held on the occasion of his death. Compiled by Geo. B. Kulp, Editor of the *Luzerne Legal Register*. Portrait.

8vo. pp. 42.

Wilkes-Barre, Pa. 1875.

Reprinted from the *Luzerne Legal Register* for July 16, 1875, Vol. IV, No. 29.

— Families of the Wyoming Valley: Biographical, Genealogical, and Historical. Sketches of the Bench and Bar of Luzerne county, Pennsylvania. By Geo. B. Kulp, Historiographer of the Wyoming Historical and Geological Society. In two volumes. Vol. I.

"This shall be written for the generation to come."—*Psalms cii: 18.*
"Remember the days of old; consider the years of many gener-

ations; ask thy father and he will shew thee, thy elders, and they will tell thee."—*Deut. xxxii: 7.*

"The man who feels no sentiment of veneration for the memory of his forefathers, who has no natural regard for his ancestors or his kindred, is himself unworthy of kindred regard or remembrance."

—*Daniel Webster.*

8vo. pp. viii+504. *Wilkes-Barre, Pa. E. B. Yordy, Printer. 1885.*

A number of these sketches have already appeared in the *Luzerne Legal Register*, and some have been published as separate pamphlets.

LOSSING, BENSON J. The Pictorial Field Book of the Revolution, and Illustrations, by Pen and Pencil, of the History, Biography, Scenery, Relics and Traditions of the War for Independence; with eleven hundred engravings on wood, by Lossing and Burrit, chiefly from original sketches by the author.

Large 8vo. 2 vols. pp. 783+772. *New York. Harper & Brothers, &c. 1859.*

Vol. I. p. 337-380, including Chapters XV. and XVI., give the history of Wyoming Valley from 1742 to 1859. Boon, No. 1219, \$6.50. Boon, No. 2964, uncut, gilt top, \$15.00. Woodward, 1869, No. 3164, \$7.00. Field, No. 1392, \$10.50. Menzies, half mor., gilt top, uncut, No. 1267, \$31.00.

LUZERNE COUNTY BIBLE SOCIETY, Sixty-third Annual Meeting of the. 8vo. pp. 4. *s. l. s. a. [1882.]*

— Ibid. Sixty-fourth Annual Meeting of the Executive Committee, held in Wilkes-Barre, April 30th, 1883.

8vo. pp. 4. *s. l. s. a. [1883.]*

MCCOY, JOSEPH. The Frontier Maid; or, a Tale of Wyoming: A Poem, in Five Cantos.

12mo. pp. 208+1. *Wilkes-Barre, Pa. Printed by Steuben Butler and Samuel Maffet. 1819.*

Contains twenty pages of Historical notes.

This work is very scarce, the author himself having burned the larger part of the edition.

MAGAZINE OF AMERICAN HISTORY, THE, with Notes and Queries.

Quarto, 12 vols. *New York. A. S. Barnes & Co. 1877-1885.*

Vol. IV. Sullivan's Expedition against the Six Nations, 1779. Thos. C. Armory, p. 420-426.

Vol. XII. Early Connecticut Claims in Pennsylvania, p. 234-241.

MANHEIM, F. Affecting History of the Dreadful Distresses of Frederick Manheim's Family, to which are added the Sufferings of John Corbly's Family. An Encounter between a White Man and Two Savages. Extraordinary Bravery of a Woman. Adventures of Capt. Isaac Stewart. Deposition of Massey Harbeson. Adventures and Sufferings of Peter Wilkinson. Remarkable Adventures and Sufferings of Jackson Johonnot. Account of the Destruction of the Settlement at Wyoming. Plate by Maverick.

8vo. pp. 48. *Philadelphia. Printed (for Matthew Carey) by D. Humphreys. 1794.*

Field, No. 1458, \$3.75. Brinley, No. 5559.

— Ibid. *Philadelphia. Matthew Carey. 1800.*

MAPS.

1. Map of the Wyoming and Lackawanna Valleys, by George Jones. Principally from a map constructed by Col. John L. Butler, of Wilkes-Barre.

8x14 in. s. l. s. a.

2. Map of Luzerne County, Executed in Conformity to an Act of the Legislature of Pennsylvania, by Isaac Chapman, A. D. 1823.

24x40 in. 1823.

3. Map of the Anthracite Coal Fields, and part of the Bituminous Coal Fields of Pennsylvania. Prepared by a Committee of the Senate.

18x20 in. (Johnson's Report.) *Harrisburg. 1834.*

4. Map of the Anthracite Regions of Pennsylvania, embracing the First and Second and part of the Wyoming Coal Fields and Montour Iron Ore Range, by W. F. Roberts, Practical Geologist and Engineer of Mines, Hazleton, Luzerne county, Penn., March, 1849.

$2\frac{1}{2}$ x6 ft. *Philadelphia. O. S. Duval. [1849.]*

5. Plan of the Town of Wilkes-Barre, Luzerne County, Pa., from Original Surveys by I. C. Sidney, Surveyor and Civil Engineer, 80 Walnut street, Philadelphia. Illustrated.

3x4 ft. *Published by Richard Clark, 100 Chestnut street, Philadelphia. 1850.*

6. Map of the County of Luzerne, Pennsylvania, constructed from Especial Surveys by Capt. David Schooley, assisted by McNair and Sturdevant, Civil Engineers.

5x6 ft., on rollers. *New York. Published by Lacoë & Schooley. 1864.*

7. Map of Luzerne County. Constructed from Official Surveys for Stewart Pearce, by W. H. Sturdevant, Civil Engineer. 1866.

This map, issued with Pearce's "Annals of Luzerne County," contains also an "Early Map of Wyoming and Lackawanna Valleys."

8. Map of Wilkes-Barre, Luzerne County, Pennsylvania, from Actual Surveys by H. W. Hopkins, Civil Engineer. Drawn under the directions of G. M. Hopkins, C. E., 204 South Fifth street, Philadelphia, Pa.

4x5 ft., rollers. *Published by M. S. Converse and G. M. Hopkins. 1870.*

9. Map. Atlas of Luzerne County, Pennsylvania, from

Actual Surveys by and under the direction of D. G. Beers.

Large 4to pp. 183. *Published by A. Pomeroy & Co., 320 Chestnut St., Philadelphia. 1873.*

10. Warrantee Atlas of Luzerne County, Pennsylvania, showing the original purchases from the Commonwealth, from 1755 to 1874. Drawn by and under the direction of J. P. Weller, County Surveyor, for the Commissioners of the County of Luzerne.

Large folio, Nos. 35. *New York. Charles M. Cornwall. Published 1874.*

The cost of issuing this Atlas was \$17,000.

11. Land Map of the County of Luzerne, Pennsylvania, compiled from Official Drafts and Actual Surveys by Wm. H. Sturdevant, Surveyor.

4x6 ft. *Published by F. Sturdevant & Co. 1874.*

12. Map of the City of Wilkes-Barre, Luzerne County, Pennsylvania.

21x36 in. *s. l. s. a. [Wilkes-Barre. 1874.]*

13. Historical Map of Pennsylvania; showing the Indian names of Streams and Villages and Paths of Travel; the sites of old Forts and Battle Fields; the successive Purchases from the Indians; and the names and dates of Counties and County Towns, with Tables of Forts and Proprietary Manors. Edited by P. W. Sheaffer and others.

8vo. pp. 27. *Publication Fund of the Historical Society of Pennsylvania, &c. 1875.*

14. Map. Webb's Luzerne and Wyoming Counties, Pennsylvania, drawn by H. L. Griffis, Civil and Mining Engineer, Montrose.

3x4 ft., on rollers. *Published by Edward A. Webb, Easton, Pa. 1875.*

15. [HAKES, HARRY, M. D.] The Beautiful Valley of Wyoming, as it appeared July 3d, 1778.
 14x26 in. *s. l. s. a.* [Wilkes-Barre. 1878.]
16. Map of the Group of Anthracite Basins in Pennsylvania. Compiled by R. C. Taylor, F. G. S.
 10x14 in. (Taylor's Statistics.)
17. Wilkes-Barre, Pennsylvania, 1882.
 36x24 in. *Published by the Philadelphia Publishing House,*
C. J. Corbin, Field Manager.

A bird's-eye view of the city.

MEAD, Rev. A. P. Manna in the Wilderness ; or, the Grove and its Altar, Offerings, and Thrilling Incidents. Containing a History of the Origin and rise of Camp Meetings, and a defence of this remarkable Means of Grace ; also, an account of the Wyoming Camp Meeting, together with Sketches of Sermons and Preachers. By Rev. A. P. Mead, of Wyoming Conference. With an Introduction by Rev. J. B. Wakeley, of New York, author of " Heroes of Methodism," " Lost Chapters," &c., &c. Illustrated.
 12mo. pp. 417. *Philadelphia. Perkenpine & Higgins, &c.*
 1859.

A second edition also exists.

MEGINNESS, J. F. Otzinachson ; or, a History of the West Branch Valley of the Susquehanna, embracing a full account of its Settlement, Trials and Privations endured by the first Pioneers. Full accounts of the Indian Wars, Predatory Incursions, Abductions, Massacres, &c., together with an account of the Fair Play System and the Trying Scenes of the Big Runaway, interspersed with Biographical Sketches of some of the leading Set-

tlers' Families, etc., together with pertinent Anecdotes, Statistics, and much valuable matter entirely new. Illustrated.

8vo. pp. 518.

Philadelphia. 1857.

Gives the Pennamite side of the Susquehanna difficulties.

Field, No. 1525, \$2.75. Cincinnati, 1878, \$5.00.

MEMOIR of the Distinguished Mohawk Indian Chief, Sachem, and War-Captain, Joseph Brant. Compiled from the Most Reliable and Authentic Records, including a brief History of the Principal Events of his Life, with an Appendix and Portrait.

12mo. pp. 89.

Brantford, Ontario. 1872.

Cincinnati, 1878, \$1.00.

MINER, CHARLES. History of Wyoming; in a Series of Letters from Charles Miner to his son, William Penn Miner, Esq. Illustrations and Maps.

"Diligence and accuracy are the only merits which a Historical writer may ascribe to himself."

"I have carefully examined all the original materials that could illustrate the subject I had undertaken to treat."

8vo. pp. 490+104. *Philadelphia.* Published by J. Crissy,
No. 4 Miners street. 1845.

The volume contains an appendix of 104 pages, comprising "The Hazleton Travellers, or numerous personal and family sketches of the ancient sufferers. Together with various incidental and illustrative matter, including a description of the Monument and a ballad of the terrible Massacre of 1778, written immediately after the event." "The Hazleton Travellers" was first published as a serial in the *Wyoming Herald* of 1838 and '39, and contains biographical sketches which Mr. Miner omitted from his History of Wyoming.

Boon, No. 2564, \$3.00. Woodward, No. 3140, \$1.75. Field, No. 1565. Menzies, half mor., gilt top, uncut, 16 illustrations added, No. 1394, \$9.00; Brinley, No. 3365, \$4.25. Cincinnati, 1878, \$3.50.

MINER, LEWIS H. *The Valley of Wyoming ; the Romance of its History, and its Poetry ; also a Specimen of Indian Eloquence.* Compiled by a Native of the Valley.
8vo. pp. 153. *New York. Robert H. Johnston & Co., and sold by C. E. Butler, Wilkes-Barre, Pa., 1866.*

MINUTES of the Provincial Council of Pennsylvania, from the organization to the termination of the Proprietary Government. Published by the State. Containing the Proceedings of Council from March 10, 1683, to December 20, 1790.

8vo. 16 vols. *Harrisburg. Printed by Theophilus Fenn. 1838-1853.*

These are commonly known as "The Colonial Records." The Colonial Records and "Hazard's Pennsylvania Archives" (q. v.) usually form one set, including the "General Index" (q. v.) of 29 volumes. They can be purchased at from \$20 to \$30.

MOISTER, WILLIAM. *Memoir of Roger Moister, of the Methodist Episcopal Church ; known in the United States as The Patriarch of Wyoming : with a brief account of Methodism in America.* By his son, William Moister, of the British Conference, author of, &c., &c. Illustrated.

12mo. pp. 196. *London. 1883.*

MOORE, FRANK. *Diary of the American Revolution. From Newspapers and Original Documents.* Illustrated.

8vo. 2 vols. pp. 528, 559. *New York. Charles Leuber. 1859.*

— Second Edition. 1860.

Vol. II., p. 71-76, contains the first published account of the Massacre of Wyoming, from the *New-York Journal* of July 20, 1778. Cincinnati, 1878, \$4.00.

MUSIC.

Music, Composed and Arranged for the One Hundredth Anniversary of the Battle and Massacre of Wyoming, 3d July, 1778—3d July, 1878. Committee on Music: Calvin Parsons, etc., etc. (Monument of Wyoming on cover.)

Large 8vo. pp. 10. *Scranton, Pa. Horton Brothers, Steam Printers and Stationers.* 1878.

— 1778-1878. One Hundredth Anniversary of the Battle and Massacre of Wyoming. Wyoming, July 3, Wilkes-Barre, July 4, 1878.

Large 8vo. pp. 3. *Wilkes-Barre, Pa. E. B. Yordy, etc., etc.* 1878.

NEW ENGLAND HISTORICAL AND GENEALOGICAL REGISTER, THE. Published Quarterly. By the New England Historic, Genealogical Society.

8vo. vols. XXXVII. *Boston.* 1845-1884.

Vol. XIV., p. 265, Mrs. Skinner and the Massacre of Wyoming. By D. Williams Patterson.

NEWSPAPERS.

Carbondale.

- 1833-1840. The Northern Pennsylvanian.
- 1838-1841. The Carbondale Journal.
- 1842-1844. The Carbondale Gazette, changed to
- 1844-1846. The Catholic Mirror.
- 1845-1849. The Carbondale Democrat, changed to
- 1849-1850. The Lackawanna Citizen and Carbondale Democrat, changed to
- 1850-1854. The Lackawanna Citizen.
- 1849-1851. The Lackawanna Journal, changed to
- 1851-1857. The Carbondale Transcript and Lackawanna Journal, changed to
- 1857-1859. The Advance, changed to
- 1859-1885. The Weekly Advance.
- 1854. The Carbondale Democrat.

1855. The Democratic Standard and Know-Nothing Expositor.
 1872-1885. The Carbondale Leader.
 1879-1885. The Critic.

Hazleton.

1866. The Hazleton Sentinel, consolidated with
 1870. The Daily News, and
 1875-1884. The Anthracite Record, and named
 1874-1878. The Anthracite Hazleton Sentinel.
 1878-1884. The Middle Coal Field Advertiser, changed to
 1876-1884. The Daily Bulletin.
 1877-1885. The Hazleton Journal.
 1872-1884. The Mountain Beacon.
 1872-1884. The Hazleton Volksblatt.

Pittston.

- 1850-1885. The Pittston Gazette.
 1855. The Pittston Herald, sold to the Gazette.
 1859. The Pittston Free Press.
 1871-1873. The Wyoming Valley Journal, and
 The Daily Journal, both consolidated with The
 1870-1877. Pittston Comet, ceased 1877.
 1876. The Luzerne Leader, ceased.
 1877-1885. The Evening Press.
 1878. The Sunday Plain Dealer, now Sunday News-
 Dealer, of Wilkes-Barre, q. v.
 1878. The Pittston Express.
 1880. The Daily Watchman.

Plymouth.

1856. The Plymouth Register.
 1869-1885. The Plymouth Star, now Weekly Star.
 1872. The Temperance Record, changed to
 1873-1874. The Plymouth Index.
 1878-1879. The Plymouth Herald, sold to
 1879-1884. The Plymouth Record.
 1878. The Plymouth Enterprise.

Scranton, Lackawanna county.

- 1845-1847. The Providence Mirror and Lackawannian.
 1853-1856. The Lackawanna Herald, consolidated, 1856, with
 1855-1856. The Spirit of the Valley.

- 1856-1860. The Herald of the Union.
 1855. The Tri-Weekly Experiment, absorbed in the above.
 1866. The Morning Herald,
 1860. —— The Scranton Register.
 —— 1869. The Daily Register.
 1856-1885. The Scranton Republican.
 The Morning Republican.
 Daily Republican.
 1865-1885. The Scranton Wochenblatt.
 1867-1875. The Scranton City Journal, changed to
 1875-1885. The Scranton Journal.
 1868-1870. The Examiner, changed to
 The Democrat.
 The Daily Democrat.
 1869-1879. The Banner America.
 1870-1885. The Daily Times.
 1873-1885. The Weekly Times.
 1873-1885. The Law Times.
 1872-1885. The Sunday Morning Free Press.
 1873. The Hyde Park Visitor.
 1874-1885. The Scranton Herald.
 1876. The Avalanche.
 1877-1878. The Daily Observer, changed to
 1878. The Evening Star.
 1877-1878. The People's Shield.
 1877. The Welsh Punch.
 1878. The Sunday Visitor.
 1877-1878. The Industrial Advocate.
 1878. The Daily Advocate.
 1879. The Workingman's Banner.
 1879. The Lackawanna Union.
 1879. The Sunday Breeze, merged into
 The News-Dealer.
 1879. The Providence Echo.
 1879-1880. The Christmas Argosy.
 1880. Captain O'Brien's Monthly Magazine.

Tunkhannock.

1841. The Wyoming Patrol and Republican Standard.
 1855-1860. The North Branch Democrat, changed to
 1860. The Intelligencer.

1860. The Wyoming Republican.
 1861-1885. The Wyoming Democrat.
 1869-1885. The Tunkhannock Republican.
 1876-1885. The Nicholson Standard.

Wilkes-Barre.

- 1795-1801. The Herald of the Times, changed to
 The Wilkes-Barre Gazette, ceased 1801.
 1801-1811. The Luzerne Federalist, changed to
 1811-1818. The Gleaner, ceased 1818.
 1810-1818. The Susquehanna Democrat, ceased about 1818
 1818-1835. The Wyoming Herald, merged in 1835 into
 1832-1839. The Wyoming Republican, united in 1839 with
 1828-1852. The Republican Farmer, sold 1852 to
 The Luzerne Democrat, changed to
 1854-1879. The Luzerne Union, consolidated with
 1876-1879. The Leader, and name changed to
 1871-1885. The Union Leader.
 1852. The Daily Telegraph.
 1869. The Daily Union.
 1832-1838. The Anti-Masonic Advocate, sold to
 1838-1853. The Wilkes-Barre Advocate, changed to

 1853-1885. The Record of the Times.
 1870-1885. The Record of the Times, Daily.
 1841-1885. The Democratic Waechter.
 The Volksfreund.
 1877. The Sunday Morning News.
 1878. The Plain Dealer, Sunday paper, consolidated with
 1878-1885. The News-Dealer, Sunday paper.
 1885. The News-Dealer, Daily.
 1880. The People's Friend.
 186 -1869. The Evening Star.
 1872-1885. The Luzerne Legal Register.
 The Telephone.

The above list is compiled from the History of the Press in Munsell's History of Luzerne, Lackawanna, and Wyoming Counties.

The Pittston Gazette, the Scranton Republican, and the Wilkes-Barre papers can be found in the Library of the Wyoming Historical and Geological Society.

In Bradford county the Press has had many ventures since 1813, a list of which can be found in Craft's "History of Bradford county."

Among these "The Athens 'Gleaner,'" 1870-1874, published at Athens, made local history a specialty, under the auspices of the Bradford County Historical Society, and will be found an invaluable aid to the student of Wyoming history. "The Bradford Republican," of Towanda, 1871-1885, also contains valuable historical articles.

"PAPERS Relating to the Susquehanna River, 1683-1757." Documentary History of New York.

8vo. vol. 1, p. 391-420. Albany. 1849.

These papers include "Remarks upon the Observations of the Proprietors of Pennsylvania, on a Paragraph of Sir William Johnson's Letter to the Right Honorable the Lords of Trade and Plantations, bearing date the 10th of September, 1757."

PARKE, Rev. N. G. The History of the Presbytery of Luzerne. A Discourse delivered in Carbondale, September 20, 1871, before the Presbytery of Lackawanna, and at their request.

8vo. pp. 26. *J. W. Freeman, Steam Book and Job Printer, Pittston, Pa.* 1875.

— First Presbyterian Church of Pittston, Pa. Historical Discourse. Delivered Sabbath, June 12, 1876, with Supplement, containing Roll of Officers and Members for the year 1879, also those dismissed to the Presbyterian Church of West Pittston, together with the Names of Deceased Members, and those otherwise dropped from the Rolls.

8vo. pp. 43. *Pittston, Pa. Hart, Printer, Gazette Office.* 1879.

A discourse prepared in accordance with the recommendation of the General Assembly for the Centennial year, and containing many facts of Wyoming History. Edition, 250 copies.

PEARCE, STEWART. Annals of Luzerne County. A Record of Interesting Events, Traditions and Anecdotes from the First Settlement at Wyoming to 1860. Illustrated by a Map and 33 Engravings.

8vo. pp. 554. *Philadelphia. J. B. Lippencott & Co.* 1860.

PEARCE, STEWART. *Ibid.* Second Edition, with Notes, Corrections and Valuable Additions, and 34 Engravings. 8vo. pp. 564. *Philadelphia.* *J. B. Lippencott & Co.* 1860. A third edition is in press in accordance with the "last will and testament" of the author.

Cincinnati, 1878, \$4.00, now scarce. New York, 1884, \$5.00.

PECK, Rev. GEORGE, D. D. Wyoming. Its History, Stirring Incidents, and Romantic Adventures. Illustrated. 12mo. pp. 432. *New York.* *Harper & Brothers, Publishers, Franklin Square.* 1858.

Cincinnati, 1878, \$1.75. New York, 1884, \$1.25. Boone, No. 2465, 50 cents. Menzies, No. 1575, half mor., uncut, gilt top, \$2.75. Bushnell, No. 1786, half mor., 16 portraits inserted, \$4.75.

— Early Methodism, within the bounds of the old Genesee Conference, from 1788 to 1828; or, the first forty years of Wesleyan Evangelism in Northern Pennsylvania, Central and Western New York, and Canada, containing Sketches of Interesting Localities, Exciting Scenes and Prominent Actors. Portrait.

12mo. pp. 512. *New York.* *Published by Carlton & Porter, 200 Mulberry street.* 1860.

Now scarce.

PENNSYLVANIA ARCHIVES. Second series. Published under direction of Matthew S. Quay, Secretary of the Commonwealth—Edited by John B. Linn and W. H. Egle, M. D. Illustration and Maps.

8vo. 12 vols. *Harrisburg, &c.* 1874-1880.

Vide Hazard, Samuel..

PENNSYLVANIA MAGAZINE OF HISTORY AND BIOGRAPHY, THE. Illustrations and Maps.

7 vols. *Philadelphia.* *Historical Society of Pennsylvania.* 1877-1885.

Vol. III., Madame Montour, by Jno. G. Freeze, p. 79.

Vol. IV., The Montours, by Wm. M. Darlington, p. 218.

PERKINS, MRS. GEORGE A. Early Times on the Susquehanna.

" Fair river, though thus silently you flow,
On thy green banks once woke the wail of woe."
—*Lewers.*

12 mo. pp. 287+2. *Binghamton. Malette & Reid, Printers.* 1870.

PETITION TO CONGRESS of the Sufferers of Wyoming, Pennsylvania. Executive Documents, Twenty-fifth Congress, 3d Session. House Documents No. 203, February 18, 1839.

8vo. pp.

Presented, laid on the table, and ordered to be printed.

PICKERING, OCTAVIUS. The Life of Timothy Pickering.
By his son, Octavius Pickering. Portraits.

Royal 8vo. 4 vols. pp. xviii.+549+44+509+499+512.

Boston. Little, Brown & Company. 1867-1873.

The first volume was written by Octavius Pickering; the others by Hon. Charles W. Upham, in accordance with Mr. O. Pickering's last will.

PITTSTON GAZETTE CENTENNIAL HANDBOOK. 1778-1878.

One Hundredth Anniversary of the Battle and Massacre of Wyoming, July 3d and 4th, 1878. Containing a complete Historical Sketch of Wyoming Valley, with Illustrations and Portraits, Descriptions of Points of Interest in the Vicinity; Statistics showing the Wonderful Progress of the Valley during the past century, and its Prospective Greatness; together with the Order of Exercises of the Centennial Anniversary of the Historic Struggle which has made Wyoming famous throughout the World.

8vo. pp. 66. *Pittston, Pa. Gazette Print.* 1878.

A very pretentious title page for an advertising medium, 24 pages of which are compiled from Chapman's History.

POTTER'S AMERICAN MONTHLY.

Vol. XI., p. 16. Through the Lehigh and Wyoming Valleys. By J. Bonsall.

PRIEST, J. Stories of Early Settlers in the Wilderness; embracing the Life of Mrs. Priest, late of Otsego County, N. Y., with Various and Interesting Accounts of Others; the first Raftsmen of the Susquehanna; a short Account of Brant, the British Indian Chief; and of the Massacre of Wyoming. Embellished with a large and beautiful engraving. By Josiah Priest.

8vo. pp. 40. Albany. Printed by J. Munsell. 1837.

Boon, No. 2931, 75 cents. Field, 1866, \$1.62. Brinley, No. 5582.

ROBINSON, Dr. J. H. The Royal Greens; or, the Scout of the Susquehanna. A Tale of the Valley of Wyoming. Illustrated Title.

New York. Published by Samuel French, 121 Nassau street.

SEVEN BROTHERS, THE, of Wyoming; or, the Brigands of the Revolution. By the author of "Morgan, the Buccaneer, et al."

8vo. Philadelphia. T. B. Peterson & Brother. [s. a.]

Field, No. 3105, 37 cents.

SCHEME for the Settlement of a New Colony to the Westward of Pennsylvania, for the Enlargement of His Majesty's Dominions in America, for the further Promotion of the Christian Religion among the Indian Natives, and for the more effectual securing them in His Majesty's Alliance. 1755.

See Pennsylvania Archives, Vol. 2, p. 301.

SHERWOOD, C. Origin and History of the Newton Baptist Church.

8vo. p. Gazette Steam Print, Pittston, Pa. 1873.

SILLIMAN, BENJAMIN. Valleys of Lackawanna and Wyoming.

8vo. pp. 29.

This paper appeared also in Hazard's *Register*, Vol. VI. (q. v.), and also in Silliman's American Journal of Science.

STEPHENS, Mrs. ANN S. Mary Derwent.

12mo. pp. 408. *Philadelphia. T. B. Peterson, &c.* 1858.

A work of fiction portraying the early times of Wyoming.

STEVENS, Rt. Rev. WM. BACON, DD., LL. D. A Memorial Discourse on the Hon. John Nesbitt Conyngham, LL. D. Delivered in Stephen's Church, Wilkes-Barre, Pa., on Thursday, the 20th of April, 1871, by Wm. Bacon Stevens, DD., LL. D., Bishop of the Diocese of Pennsylvania.

8vo. pp. 226. *Philadelphia. McCalla & Stavely.* 1871.

— A Memorial Discourse, &c.; another edition of the above, omitting all additional matter, such as the appendix.

8vo. pp. 45. *Philadelphia. McCalla & Stavely.* 1871.

SMITH, BENJAMIN. Sketch of the Life of Benjamin Smith, a Native of New York, during the American Revolution, by Land and Sea, in the years 1776, 1777, 1778, 1780 and 1781.

8vo. pp. 47. *Wilkes-Barre, Pa. Printed for Benjamin Smith.* 1820.

SMITH, WM. HOOKER, M. D. Alchymy Explained and made Familiar; or, a Drop of Honey for a Despairing Alchymist; collected from the Alchymist's Rock, or Philosopher's Stone. By William Hooker Smith, M. D., Putnam Township, Luzerne County, [Penn.] January 1, 1811. Printed for the author.

16mo. pp. [Wilkes-Barre. 1811.]

SWIFT, Rev. W. H. History of Memorial Church, Wilkes-Barre, Pa. Review of the First Five Years. A Sermon by the Pastor, May 4, 1879. Published by request.
8vo. pp. 20. *Wilkes-Barre, Pa. E. B. Yordy, Printer.* 1879.

SCOTT, EBEN GREENOUGH. The Development of Constitutional Liberty in the English Colonies of America.

"The Spirit of Liberty is, indeed, a bold and fearless Spirit."—*Daniel Webster.*

"Les nations libres sont superbes."—*Montesquieu.*

8vo. pp. 350. *New York. G. P. Putnam's Sons.* 1882.

SLOCUM, JAMES. Frances Slocum, the Indian Captive.

8vo. pp. 8. *s. l. s. a. [Brownsville, Pa.] 1876.]*

This is a brief account of the discovery of the Indian Captive by her brothers, and the causes which led to that discovery. It was first printed in the Brownsville *Clipper* in 1876 and about 30 copies issued in the above form.

STONE, WM. L. Life of Joseph Brant. (Thayendanegea.) Including the Border Wars of the American Revolution, and Sketches of the Indian Campaigns of Generals Harmer, St. Clair and Wayne, and other Matters connected with the Indian Relations of the United States and Great Britain, from the Peace of 1783 to the Indian Peace of 1795. Illustrations and Maps.

8vo. 2 vols. pp. xxxi+425+lvii—viii+537+lxiv.
New York. George Dearborn & Co., 38 Gold street.
1838.

— Ibid. Second Edition, with an Index.

8vo. 2 vols. pp. 532+638. *Albany, N. Y. F. Munsell,*
78 State street. 1865.

Edition of 500 copies, pub., at \$6.00.

— The Poetry and History of Wyoming; containing Campbell's Gertrude, with a Biographical Sketch of the

Author, by Washington Irving, and the History of Wyoming, from its Discovery to the Beginning of the present century. Illustrated.

12mo. pp. xxiv+324. *New York and London.* Wiley and Putnam. 1841.

Boon, No. 2563, \$1.00.

— Same. Title slightly altered. Second Edition enlarged.

12mo. pp. 398. *New York.* Mark Newman. 1844.

— Same. "Third Edition, with an Index."

12mo. pp. xxiv+406. *Albany.* J. Munsell, &c. 1864.

This is the stock of the second edition with index and new title added. An issue of the third edition contains on the title the imprint of "C. E. Butler, Bookseller, Wilkes-Barre, Pa., 1873."

Boone, No. 2566, \$1.50. Woodward, No. 3141, \$1.38. Field, No. 2290, \$1.25. Menzies, uncut, illus., half calf, No. 1920, \$3.00. Brinley, No. 3364, \$1.00.

— Border Wars of the American Revolution. By William L. Stone, author of the "Life and Times of Red Jacket," "History of Wyoming," &c., &c. In two volumes.

16mo. 2 vols. pp. 384+381. *New York.* Harper & Brothers. 1843.

Field, No. 2286, half mor., gilt, \$2.87, per vol.

— The Life and Times of Sir William M. Johnson. Portrait.

8vo. 2 vols. pp. 555+544. *Albany.* J. Munsell. 1865.

Edition of 800 copies pub. at \$6.00.

Chapter XV., vol. 1, p. 287-312, contains the "Massacre of Wyoming."

SULLIVAN'S CAMPAIGN OF 1779.

HARDENBERGH, Lieut. JOHN L. The Journal of Lieut. John L. Hardenbergh, of the Second New York

Continental Regiment, from May 1 to October 3, 1779, in General Sullivan's Campaign against the Western Indians. With an Introduction, Copious Historical Notes, and Maps of the Battlefield of Newtown and Groveland Ambuscade. By Gen. John S. Clark. And parts of these Journals never before published. Also a Biographical Sketch by Rev. Charles Hawley, D. D., President of the Society. Maps.

8vo. pp. 94.

Auburn, N. Y. 1879.

This is Number One of the Collections of the Cayuga County Historical Society. It contains a Bibliography of all the known journals of this campaign, published and unpublished, in Number XXXV., with their present location. Therefore no list of these journals is presented here.

THE CENTENNIAL CELEBRATION of General Sullivan's Campaign against the Iroquois in 1779. Held at Waterloo, September 3d, 1879. Prepared by Diedrich Willers, Jr., late Secretary of State. To which is prefixed a Sketch of the Waterloo Library and Historical Society. By Rev. S. H. Gridley, D. D. Published under the auspices of the Waterloo Library and Historical Society. Illustrated.

8vo. pp. 358.

Waterloo, N. Y. 1880.

[O'REILLY, HENRY.] Notices of Sullivan's Campaign; or, the Revolutionary Warfare in Western New York. Embodied in the Addresses and Documents connected with the Funeral Honours rendered to those who fell with the Gallant Boyd in the Genesee Valley, including the Remarks of Gov. Seward at Mount Hope.

12mo. pp. 192.

Rochester. 1842.

Boon, full mor., gilt edges, \$5.00. Menzies, half mor., No. 1524, \$5.25.

SUSQUEHANNA RIVER. A Description of the Susquehanna River. With Observations on the Present State of its Trade and Navigation, and their Practicable and Proper Improvement. Illustrated with a Map and an Appendix. 8vo. pp. 60. *Philadelphia. Printed by Z. Poulson, Jr.* 1796.

SUSQUEHANNA TITLE, THE.

1. The Susquehanna Case, a part of Connecticut. Opinion by Thurlow, Wedderburne, Dunning and Jackson.

s. l. [1761.]

2. Gale, Benjamin. Letter to J. W., Esquire. Containing a Narrative of the Principal Matters of a Public and Interesting Nature, which were Subjects of the Debates and Resolves of the General Assembly of the Colony of Connecticut during their Sessions in May, 1769.

12mo. pp.

Hartford. 1769.

This pamphlet, with Dyer's "Remarks," and Gale's "Observations" on Dyer, bound in one volume, half vel., brought at the Brinley sale \$61.00. (Brinley, 2120.) Murphy, No. 1002, \$3.00.

3. Gale, Benjamin. Observations on a Pamphlet, entitled, Remarks on D. Gale's Letter to J. W., Esq., signed E. D., of which the Hon. Eliphalet Dyer is the reputed author. By Benjamin Gale, A. M.

12 mo. pp.

Hartford, N. A. [1769.]

Brinley, No. 2120.

4. D(yer) E(liphalet). Remarks on D. Gale's Letter to J. W., Esq.

12mo. pp.

s. l. s. a. [1769.]

Brinley, 2120.

5. The State of the Lands said to be once within the Bounds of the Charter of the Colony of Connecticut,

West of the Province of New York, Considered. By
the Publick's Humble Servant. * * *

8vo. pp. 16. *New York.* 1770.

Brinley, No. 2121, half mor., sold for \$32.00.

6. The Right of the Governor and Company of the Colony of Connecticut to Claim and Hold the Lands within the Limits of their Charter, lying West of the Province of New York, Stated and Considered; in a Letter to J. W., Esquire.

8vo. pp. 47. *Hartford.* 1773.

Brinley, No. 2122, half mor., uncut, \$25.00.

7. The Susquehanna Case.

Small 4to. pp. *s. l. s. a.* [Norwich. 1774.]

Brinley, No. 2127.

8. Proclamation Relative to the Connecticut Settlers.

Philadelphia. Hall & Sellers. 1774.

From Hildeburn's "Issues of the Press in Pennsylvania, 1770-1776."

9. Trumbull, Benjamin. Plea in Vindication of the Connecticut Title to the Contested Lands, lying West of the Province of New York. Addressed to the Publick. By Benjamin Trumbull, A. M.

8vo. pp. *New Haven.* 1774.

Brinley, No. 2125, sold for \$5.00.

10. [Smith, W.] Examination of the Connecticut Claim to Lands in Pennsylvania, with an Appendix, containing Extracts and Copies from Original Papers. Map.

8vo. pp. *Philadelphia. Cruikshank.* 1774.

Brinley, No. 2124, half calf, \$16.00. Do, No. 3096, \$5.25. Do, No. 3097, \$6.50. Murphy, No. 656, \$16.00.

11. Report of the Commissioners appointed by the General Assembly of this Colony to Treat with the

Proprietaries of Pennsylvania Respecting the Boundaries of this Colony and that Province.

4to. pp. 36.

Norwich. 1774.

Brinley, No. 2123, half mor., uncut, \$28.00.

12. Articles of Agreement for Conducting the Business respecting the Lands called Gore, granted by Patent to Jeremiah Halsey and Andrew Ward, Esquire.

12mo.

Hartford. 1795.

This pamphlet bound in one volume with "An Important Statement," 1801, sold in the Brinley sale for \$33.00. (Brinley, 2130, half vel.)

13. Additional or Supplementary Articles of Agreement in the Better Management and Improvement of the Lands belonging to Divers Persons, called the Connecticut Gore Land Company.

12mo.

Hartford. 1796.

14. [Bidwell, B.] The Susquehanna Title, Stated and Examined, in a series of Numbers just published in the *Western Star*, and now republished in this form for the Benefit of the Public in General and all Persons Concerned in Particular.

8vo. pp. 115.

By Mackay Croswell. Catskill. 1796.

Information furnished by Jno. Franklin.

This pamphlet, bound with two others not pertinent to the subject, brought at Brinley's sale \$32.50. (Brinley, 2128, half calf.)

Woodward, No. 4974, \$1.40. O'Callaghan, No. 2224, \$6.00.

Murphy, No. 3120, \$6.00.

15. An Act of the General Assembly of the State of Connecticut, holden at New Haven, in October, 1796, Incorporating the Proprietors of the Sufferers' Land, so called.

Small 4to.

New Haven. 1796.

This pamphlet, bound in one volume with "The Susquehanna Case," sold in the Brinley sale for \$32.00. (Brinley, half mor., 2127.)

16. The Charge of Judge Patterson to the Jury in the Case of Vanhorne's Lessee against Dorrance. Tried at a Circuit Court of the United States, held at Philadelphia, April Term, 1795, wherein the Controverted Title to the Wyoming Lands between the Claimants under Pennsylvania and Connecticut received a Decision.

Philadelphia. 1796

17. The Connecticut Gore Title, Stated and Considered, showing the Right of the Proprietors to the Lands lately purchased by them from the State of Connecticut, lying west of the Delaware river.

Hartford. 1799.

This pamphlet is bound in one volume with "The Rise, Progress, and Effect, &c.," and "An Enquiry Concerning &c.," 1829. Brought at Brinley's sale, \$22.00. (Brinley, 2131, half vel.)

18. An Important Statement of fact relative to the Invalidity of the Pretensions formerly made upon the Pennsylvania Lands by the Unincorporated Companies of Connecticut Claimants, and by those who Claimed under those Claimants, in a Letter from the Secretary of the Land Office to the Pennsylvania Commissioners, intended to evince the Liberality of the Government and Land-holders of Pennsylvania in the Act of the 4th of April, 1799, and the releases of 120 to 180,000 Acres under the same.

8vo. pp.

Lancaster. May, 1801.

Brinley, No. 2130.

19. Cooper, Hon. Thomas, M. D., LL. D. Observations on the Wyoming Controversy, respectfully submitted to the Legislature of Pennsylvania. By Thomas Cooper.

8vo. pp. 12. *Lancaster. Printed by Francis Bailey, Centre Square. 1802.*

20. The Rise, Progress and Effect of the Claim of the Proprietors of the Connecticut Gore, Stated and Considered.
8vo. *Hartford.* 1802.
Brinley, No. 2131. Murphy, No. 2886, \$3.75.
21. Report of Committee of Congress on Memorial of Wyoming Settlers.
1802.
22. Avery, Samuel. The Susquehanna Controversy Examined. The Material Objections Against the Connecticut Title or Claim Answered. With some General Reasoning on the Whole Matter. [Done with Truth and Candor.] By Samuel Avery, Esq.
"Blessed are the Peace Makers."
16mo. pp. 142. *Wilkes-Barre, Pennsylvania.* Printed by A. & C. Miner. 1803.
23. A Brief Statement of the Origin and Progress of the Connecticut Intrusion in the State of Pennsylvania.
1803.
24. A Petition Presented by Capt. Alexander Patterson to the Legislature of Pennsylvania during the Session of 1803-4, for Compensation for the Monies he Expended and the Services he Rendered in Defence of the Pennsylvania Title against the Connecticut Claimants, in which is comprised a Faithful Historical Detail of Important and Interesting Facts and Events that took place at Wyoming, and in the County of Luzerne, &c., in consequence of the Dispute which existed between the Pennsylvania Land-holders and the Connecticut Intruders, commencing with the year 1763.
8vo. pp. 34. *Lancaster.* 1804.
Brinley, No. 2129, sold for \$3.00.

25. An Enquiry Concerning the Grant of the Legislature of Connecticut to Andrew Ward and Jeremiah Halsey, and the Rights and Obligations of the Parties under the same.

8vo.

Hartford. 1829.

Brinley, No. 2131.

26. Hoyt, Hon. Henry M. Brief of a Title in the Seventeen Townships in the County of Luzerne. A Syllabus of the Controversy between Connecticut and Pennsylvania. Read by request before the Historical Society of Pennsylvania, Nov. 10, 1879. Seal of the Pennsylvania Historical Society, and Map.

Large 8vo. pp. 145. *Harrisburg. Lane S. Hart, Printer and Binder. 1879.*

The greater part of these titles were taken from the various catalogues of libraries in which they were sold, and from No. 26, on page 101 of which Governor Hoyt has given an excellent "Bibliography of the Case." Of these 26 rare pamphlets the student will find all, excepting 7, 21, 22 and 23, in the library of Wm. M. Darlington, Esq., Pittsburgh, Pa. Nos. 2, 10, 14, 20, 22 and 26 can be found in Wilkes-Barre, Pa., among members of the Historical Society; Nos. 1, 2, 6, 9, 10, 11, 16, 17, 18, 21, 24, 26 in the Historical Society of Pennsylvania; Nos. 2, 6, 9, 10, 14, 16, 17, 19, 20, 21, 23, 24, 25 and 26 in the State Library at Harrisburg, Pa.

STRYKER, WM. S. General Maxwell's Brigade of the New Jersey Continental Line in the Expedition against the Indians in the year 1779. By William S. Stryker, Adjutant General of New Jersey. Read before the New Jersey Historical Society, at their meeting at Trenton. January 17, 1884.

8vo. pp. 66.

Trenton, N. J. 1885.

THACHER, JAMES. A Military Journal during the American Revolutionary War, from 1775 to 1783, with an Appendix, containing Biographical Sketches.

8vo. pp.

Boston. 1823.

THACHER, JAMES. Same.

8vo. pp. 494.

Hartford. 1854.

TODD, J. The Lost Sister of Wyoming. An Authentic Narrative. By Rev. John Todd.

18mo. pp. 160.

Northampton, Mass. 1842,

A history of Frances Slocum written for the Sunday school. Field, No. 2365, 62 cents. Woodward, No. 3142, 50 cents.

— The same, published in Nelson's Volume of Interesting Reading—British Library.

s. l. s. a.

TOWNER, ASHBURN. Chedayne of Kotono. A Story of the Early Days of the Republic.

12mo. pp. 606. *New York.* *Dodd, Mead & Co.* 1877.

A work of fiction, the scene of which is the "Susquehanna Company" territory. It portrays the efforts of the Pennamites to dispossess the Connecticut settlers.

WHITE, Rev. WILLIAM P. Centennial Discourse Commemorative of the First Presbyterian Church of Plymouth, Pa. Delivered by the Pastor July 2d, 1876. Published by request.

8vo. pp. 20. *Philadelphia.* Printed by Alfred Martien, 21 South 7th street.

WHYTE, W. E. July, 1776. The Centennial Chronology of Luzerne County and its Coal Fields. By W. E. W.

One hundred years of freedom,
In Freedom's holy land,
Have blessed our glorious Union
And linked us hand in hand.

12mo. pp. 56. *s. l. s. a.* [Wilkes-Barre. 1876.]

An advertising pamphlet containing 20 pages of chronology.

WYOMING CAPTIVES. A Narrative of the Capture of Certain Americans at Westmoreland, by Savages, and the Peril-

ous Escape which they effected. With some Account of the Religion, Government, Customs and Manners of the Aborigines of North America. Frontispiece (Massacre of Wyoming) inserted.

8vo. pp. 24. *Hartford. s. a. [About 1799.]*

This title is from Brinley, No. 5579, where it is called a "fresh and clear copy of an EXTREMELY RAR tract." I have never heard of another copy.

WRIGHT, Hon. HENDRICK B. Historical Sketches of Plymouth, Luzerne County, Pennsylvania. By Hendrick B. Wright, of Wilkes-Barre, Pa. With twenty-five Photographs of some of the Early Settlers and Present Residents of the Town of Plymouth, Old Landmarks, Family Residences and Places of Special Note.

12mo. pp. 419. *Philadelphia. T. B. Peterson & Brother,
306 Chestnut street. 1873.*

Published at \$4.00.

— Sketch of the Life and Public Services of Col. Hendrick B. Wright, Representative in the U. S. Congress from the 12th District of Pennsylvania. Portrait.

8vo. pp. 4. *Wilkes Barre, Pa. The Leader Book and Job
Printing House. 1878.*

A sketch of Col. Wright appears also in Kulp's "Families of Wyoming Valley."

WRIGHT, CALEB E. Wyoming. A Tale.

8vo. pp. 123. *Harper & Brothers. New York. 1864.*

— Marcus Blair. A Story of Provincial Times. Written for the Young. With Illustrations.

12mo. pp. 165. *Philadelphia. J. B. Lippencott & Co.
1873.*

WYOMING HISTORICAL AND GEOLOGICAL SOCIETY, THE, PROCEEDINGS AND COLLECTIONS OF.

1. Maxwell, Volney L. Publications of the Wyoming Historical and Geological Society. No. 1, Mineral Coal. Two Lectures read at Institute Hall, Wilkes-Barre, Penn'a, in February, 1858.
- 8vo. *Wilkes-Barre. Printed by Wm. P. Miner, at the Record of the Times Steam Printing Office. 1858.*
_____. Ibid. A "Second Edition."
- 8vo pp. 52. *New York. 1858.*
_____. Ibid. A "Third Edition," with Preface.
By the Editor of the United States *Mining Journal*.
- 8vo. pp. 32. *New York. Reprinted by John Hillyer, &c. 1860.*
_____. Ibid. A "Fourth Edition," with two-page
Preface. By the Author.
- 8vo. pp. 51. *Wilkes-Barre. Record of the Times, &c. 1869.*
This number is out of print and rare.
2. Proceedings of the same at the Annual Meeting held
February 11th, A. D. 1881, at Wilkes-Barre, Pa.
Publication Number 2.
- 8vo. pp. 58. *Wilkes-Barre, Pa. Robert Baur, &c. 1881.*
Edition of 300 copies. Price, \$0.75.
3. Proceedings of the same for the year ending February
11, 1882. Seal of the Society. Publication No. 3,
Rubricated.
- 8vo. pp. 58. *Wilkes-Barre, Pa. Printed for the Society
by E. B. Yordy. 1882.*
Edition, 500. Price, \$0.50.
4. Wright, Harrison, Ph. D. A Memorandum-De-
scription of the five Specimens of Indian Earthen-

ware Pots, in the Collection of the Wyoming Historical and Geological Society, Wilkes-Barre, Pa. Made by Harrison Wright, Recording Secretary of the Society, and Member of its Committee on Cabinet. Seal. Publication No. 4. Rubricated.

8vo. pp. 10, and seven heliotype plates. *Wilkes-Barre, Pa. Printed for the Society by E. B. Yordy. 1883.*

Edition, 300. Price, \$1.00.

5. Lacoë, R. D. List of Palaeozoic Fossil Insects of the United States and Canada. Alphabetically Arranged. Giving Names of Authors, Geological Age, Locality of Occurrence, and Place of Preservation, with References to the Principal Bibliography of the Subject. A Paper read before the Society April 6, 1883. By R. D. Lacoë. Seal. Publication No. 5. Rubricated.

8vo. pp. 21. *Wilkes-Barre, Pa. Printed for the Society by E. B. Yordy. 1883.*

Edition, 400. Price,

6. Proceedings of the Society for the year ending February 11, 1883. Seal. Publication No. 6. Rubricated.

8vo. pp. 70. *Wilkes-Barre, Pa. Printed for the Society by E. B. Yordy. 1883.*

Edition, 300. Price, \$0.75.

7. Isaac Smith Osterhout. Memorial. Report of the Committee of the Society. Seal. Publication No. 7. Portrait.

8vo. pp. 14. *Wilkes-Barre, Pa. Printed for the Society by E. B. Yordy. 1883.*

Edition, 300. Price, \$0.75.

8. Ross Memorial. William Sterling Ross and Ruth Tripp Ross. Reports of Committees of the Society. Seal. Publication No. 8. Two Portraits.
8vo. pp. 17. *Wilkes-Barre, Pa. Printed for the Society by E. B. Yordy.*
Edition, 300. Price, \$1.00.
9. Title Page and Index to Volume I. Seal. Rubricated.
8vo. pp. xi. *Wilkes-Barre, Pa. Printed for the Society by E. B. Yordy. 1858-1884.*
Edition, 400.
10. Wright, Harrison, Ph. D. Report of a Committee of the Wyoming Historical and Geological Society on the Early Shad Fisheries of the North Branch of the Susquehanna River. By Harrison Wright, Chairman of the Committee.
8vo. p. 352-359.
Published in the Bulletin of the U. S. Fish Commission. 1882.
11. Wright, Harrison, Ph. D. A Circular of Inquiry from the Wyoming Historical and Geological Society, respecting the Old Wilkes-Barre Academy. Prepared by Harrison Wright, Recording Secretary.
8vo. pp. 19. *Wilkes-Barre, Pa. Printed for the Society by E. B. Yordy. 1883.*
12. Charter, By-Laws and List of Members of the Society. Seal.
8vo. pp. 24. *Wilkes-Barre, Pa. E. B. Yordy, Printer.*
1885.
Edition, 200.
13. Proceedings and Collections. Seal. Vol. 2. Part I. Plates. Rubricated.
8vo. pp. *Wilkes-Barre, Pa. Printed for the Society by E. B. Yordy. 1885.*

HARVEY, OSCAR JEWELL. A History of Lodge No. 61, F. and A. M., Wilkes-Barre, Pa. Seal. Together with a Collection of Masonic Addresses, an Account of the Anti-Masonic Crusade, and Extended Biographical Sketches, with Portraits of Hons. John B. Gibson, Garrick Mallory, John N. Conyngham, Charles Miner, ex-Gov. Henry M. Hoyt, General E. L. Dana, and other Members of the Lodge. By Oscar Jewell Harvey, M. A., P. M. of Lodge 61.

Wilkes-Barre, Pa. E. B. Yordy, Printer. 1885.

In press.

[*Mr. Hayden desires to make this Bibliography as full and accurate as possible. He will, therefore, be grateful for any corrections or additional titles which may be known to those into whose hands this venture may fall.]*

CALVIN WADHAMS.

[At the meeting of the Society, September 14th, 1883, GEO. B. KULP, Esq., Historiographer, announced the death of Calvin Wadhams, Esq., and read the following notice:]

Calvin Wadhams died suddenly at his summer residence at Harvey's Lake, July 20, 1883. He was elected a member of this Society September 6, 1858, the first year of its existence. He was chosen its Recording Secretary in 1861, and served for eleven years, with the exception of two years, when he was Corresponding Secretary. At the annual meeting, February 11, 1873, he was elected President of the society, and served for one year, with efficiency.

He was a native of Plymouth, in this county, where he was born, December 14th, 1833, and a descendant of John Wadham, or Wadhams, as the name is now spelled, who came from Somersetshire, England, as early as 1650, and settled in Wethersfield, Conn.

His great grandfather, Rev. Noah Wadhams, was the first Wyoming emigrant of the name. He studied theology at New Haven, Conn., receiving the degree of A. M. from Yale College, 1758. He was ordained a minister of the Congregational Church, and settled as the first pastor of the New Preston Society, in the towns of New Milford and Washington, Conn., at its organization, in 1757, and continued his pastoral relations to that society for eleven years. At a meeting of the Susquehanna Company, in Connecticut, in 1768, "the standing committee was directed to procure a pastor to accompany the second colony, called the 'first forty,' for carrying on religious worship and services, according to the best of his ability, in the wilderness country," and Rev. Noah Wadhams was chosen for that purpose.

Calvin Wadhams graduated at the College of New Jersey (Princeton) in 1854, exactly one hundred years after his great-grandfather, Rev. Noah Wadhams, graduated from the same institution. He studied law with Hon. L. D. Shoemaker, and was admitted to the bar April 6, 1857. He married, October 8, 1861, Fanny D. Lynde, a native of Wilkes-Barre, daughter of John W. Lynde, a native of Pultney, Vt. Her maternal grandfather was Capt. Josiah Cleveland, of Revolutionary memory. They have had four children, Mary Catlin, Lynde Henderson, Frank Cleveland, all of whom are now deceased, and Raymond Lynde Wadhams.

As a memorial to their deceased children, Calvin Wadhams and Fanny, his wife, erected Memorial Church, one of the principal church edifices in Wilkes-Barre, at a cost of \$125,000. Their object in so doing is fully set forth in the following extract from the deed conveying the property:

"WHEREAS, Mary Catlin Wadhams, who was born July 20, 1862, and who died January 16, 1871; Lynde Henderson Wadhams, who was born April 8, 1864, and who died February 9, 1871; and Frank Cleveland Wadhams, who was born May 7, 1867, and who died January 14, 1871, were all children of Calvin Wadhams and Fanny D. L. Wadhams, and were taken away by death early in life, leaving their parents at the time childless. And the said Calvin Wadhams and Fanny D. L. Wadhams, desiring to commemorate the brief lives of their children, and feeling accountable as parents, not only for the influence exerted by their children while on earth, but for the perpetuation of good influences after they have gone to their reward, and anxious to do some act as representing the good works which they hoped of and from their children had the latter attained mature years, have erected in the city of Wilkes-

Barre a church for the worship of Almighty God, intended as a house of prayer for all people."

Mr. Wadhams had an attack of paralysis in May, 1882, from which he never wholly recovered. Previous to that time he was an active business man and enterprising citizen, solicitous for the city's welfare, and never loth to contribute of his means and time and effort to advance its interests.

He had many friends and just enough enemies to affirm his possession of that quality of self-respect without which a man is not a man.

PROCEEDINGS AND COLLECTIONS
—OF THE—
Wyoming Historical and Geological Society.

VOL. II.

WILKES-BARRÉ, PA.

Part 2.

PROCEEDINGS.

Quarterly Meeting, May 9th, 1884.

Present, nineteen members.

President Dana in the chair.

Contributions to library and cabinets were acknowledged.

Correspondence was read: New London County Historical Society relative to the Ross Memorial; Elbridge McConkey, resident clerk, explaining the cause of delay in forwarding the state publications under the provisions of the Act of 1883; Prof. Angelo Heilprin, concerning certain fossil shell-forms found in the measures of this region; Dilton Yarrington, recounting many interesting personal reminiscences of Wilkes-Barre.

The amendment to the By-Laws, relative to election of members, proposed at last meeting, was adopted finally.

The following new by-law, recommended by the Trustees, was introduced and passed first reading: "All moneys received on account of life membership shall be securely invested by the Trustees in the name of the Society, and shall form a fund to be called the Life Membership Fund, the interest only of which shall be available for the uses of the Society. The Trustees shall pay to the Treasurer,

annually, the accrued interest of said fund, or add the same to the fund, as they shall deem for the best interests of the Society."

Mr. C. A. Ashburner, of the Second Geological Survey of Pennsylvania, addressed the meeting on the present state of the work of the Survey in the Northern Anthracite Field, or Wyoming Basin; illustrating his remarks by means of the new maps of the region, prepared by Mr. Frank A. Hill. Mr. Hill followed with remarks in explanation of the maps. Messrs. Ashburner and Hill received a vote of thanks for their interesting and instructive addresses.

Quarterly Meeting, September 12th, 1884.

Present, twelve members.

President Dana in the chair.

Contributions to the library and cabinets were formally acknowledged.

George H. Butler, L. C. Darte, and Fred. Mercur were elected resident members. Pierce Butler, of Carbondale, and Col. W. L. Stone, of Jersey City, N. J., were elected corresponding members. The names of F. V. Rockafellow and J. H. Swoyer were transferred from the resident to the life membership list.

The committee on certificate of membership submitted as their report, a design prepared by Mr. George Leach, Jr.; the design was adopted and the committee discharged. The Meteorologist made report for the preceding three months which was received and ordered filed. The by-law introduced at last meeting relative to moneys received on account of life membership, etc., was, on motion, adopted finally.

Sheldon Reynolds, Esq., read a paper on "The Rev. Bernard Page, the First Episcopal Minister of Wyoming."*

* *Infra.*

Rev. H. E. Hayden read a paper on "Some Indian Medals of George I."* Messrs. Reynolds and Hayden received a vote of thanks, and their papers were referred to the Publishing Committee.

Quarterly Meeting, December 12, 1884.

Present, twenty members.

President Dana in the chair.

Contributions to the library and cabinets were acknowledged.

Correspondence read: Prof. J. T. Rothrock on the recent discovery in Luzerne county, of the lizard *Ambystoma punctata*, properly belonging to more southern latitudes; C. A. Ashburner, of the Second Geological Survey of Pennsylvania, relative to the mine maps of the Northern Coal Fields, lately issued by the Survey; Dr. D G. Brinton, in regard to the establishment of a department of Ethnology and Archæology in the Academy of Natural Sciences, Philadelphia.

The name of W. L. Conyngham was transferred from the resident to the life membership list.

Geo. B. Kulp, Esq., read a biographical sketch of Hon. Stewart Pearce, deceased.* Mr. Kulp received a vote of thanks, and the paper was referred to the Publishing Committee.

The Secretary read a paper, prepared by Prof. E. W. Claypole, on "Some Fossil Shells from the Lower Carboniferous of Wilkes-Barré."* The thanks of the Society were voted to Prof. Claypole; the paper was referred to the Publishing Committee, with instructions to communicate with the Second Geological Survey, concerning the classification

* *Infra.*

of the remaining fossil shells from the same horizon, in the possession of the Society, with the purpose of publishing the same in connection with Prof. Claypole's paper.

The Meteorologist read his report for the preceding three months, which was received and ordered filed.

The Society adopted a resolution recommending to the members and to the public the Historical Register; Notes and Queries of the Interior of Pennsylvania, by Dr. W. H. Egle, as a magazine representing the interests of this portion of the state, and deserving the support of students of history.

Annual Meeting, February 11th, 1885.

The meeting convened at 12 o'clock M.

President Dana in the chair.

On motion, adjourned to meet on the same evening at 8 o'clock.

The adjourned meeting was held persuant to the adjournment at 8 P. M.

There were present, fifteen members.

President Dana in the chair.

The Society acknowledged a large number of contributions. On motion, a vote of thanks was extended to the donors.

The following officers were elected for the ensuing year:

TRUSTEES :

DR. CHAS. F. INGHAM, EDWARD P. DARLING,

RALPH D. LACOE, SHELDON REYNOLDS,

HARRISON WRIGHT.

PRESIDENT :

HON. EDMUND L. DANA.

VICE PRESIDENTS :

DR. C. F. INGHAM, REV. H. L. JONES,

CAPT. CALVIN PARSONS, HON. E. B. COXE.

RECORDING SECRETARY :
HARRISON WRIGHT.

CORRESPONDING SECRETARY :
SHELDON REYNOLDS.

TREASURER :
ANDREW F. DERR.

LIBRARIAN :
ANDREW H. MCCLINTOCK.

ASSISTANT LIBRARIAN :
G. MORTIMER LEWIS.

CURATORS :

Archæology, SHELDON REYNOLDS.
Numismatics, H. E. HAYDEN.
Mineralogy, HARRISON WRIGHT.
Palæontology, R. D. LACOE.
Conchology, C. F. INGHAM.

Meteorologist, E. L. DANA.
Historiographer, GEORGE B. KULP.

The annual reports of the Cabinet Committee and Treasurer were read and referred to the Publishing Committee.

The Historiographer presented obituary notices of Henry Guyot, LL. D., late Professor of Geology in Princeton College and honorary member of the Society ; also, Major D. S. Bennet and Thompson Derr, late resident members.

The Meteorologist submitted his report for the months of December, 1884, and January, 1885, together with a record of the variations of the height of the river by daily observations for thirteen months past, prepared by Mr. H. G. Merrill.

Capt. John D. Colvin was elected a resident member.

Wm. Poillon, M. A., Secretary of the American Numismatic and Archæological Society, and John G. Freeze, Esq., Columbia county, were elected corresponding members.

Calvin Parsons, Esq., gave a sketch of the early settlement of a portion of Wilkes-Barré township. Hon. C. A. Miner was invited to prepare a paper on the Old Mills of Wyoming Valley.

The President called the attention of the Society to the approaching one hundredth anniversary of the erection of Luzerne county, September 25, 1886, and suggested the propriety of some observance of the event. The subject was referred to the Trustees, with the request that they report a plan for celebration.

Quarterly Meeting, May 8th, 1885.

Present, twenty-five members.

President Dana in the chair.

On motion, the regular order of business was dispensed with.

The President announced, in fitting words, the death of Dr. Harrison Wright, late the Recording Secretary of the Society. The Committee on Resolutions, previously appointed, presented through its chairman, Mr. C. Ben Johnson, resolutions expressing the esteem in which our late fellow member was held, and the high appreciation of his worth and usefulness as an officer of this Society.

The Historiographer read a carefully prepared genealogical and biographical essay of the life and character of the late Harrison Wright.

The Corresponding Secretary presented a memorial notice transmitted by the Historical Society of Pennsylvania, being an extract of the minutes of that Society, relative to the death of Harrison Wright.

David M. Jones, Esq., read a poem prepared for the occasion:

Sheldon Reynolds read a review of the literary work of Dr. Harrison Wright.

On motion, the resolutions and the several papers were referred to the Publishing Committee, with authority to incorporate such other matter relative to the subject as the committee should deem desirable, and publish the same as a memorial of Harrison Wright.*

The Secretary was instructed to communicate to the Historical Society of Pennsylvania, the grateful appreciation of this Society of the interest and sympathy expressed in the memorial notice above mentioned.

J. Ridgway Wright, W. C. Price, Col. R. Bruce Ricketts and Mrs. A. D. Reynolds were elected resident members.

Quarterly Meeting, September 11th, 1885.

There were present, twenty-four members.

President Dana in the chair.

Contributions to both library and cabinets were read and acknowledged by a vote of thanks to the several donors.

Correspondence was read as follows: Spencer F. Baird, Secretary Smithsonian Institution, relative to the presentation to the Society of The Diplomatic Review of England; Magazine of Western History, asking for the reports of the successive meetings of the Society for publication; Prof. J. P. Lesley, of the Second Geological Survey of Pennsylvania concerning the suite of fossil shells of the anthracite coal measures sent by the Society, and inclosing a partial list of classification; Hon. J. A. Sweeney, in relation to the law regulating the distribution of Pennsylvania State Publications; Dr. W. H. Egle, concerning Vol. II, Part 1, of the Society publications; Long Island Historical Society, in reference to exchange of publications.

*Proceedings of the meeting of May 8th, will appear in a future publication.

The following were elected resident members: Hon. C. D. Foster, Hon. M. B. Williams, John S. Harding, J. W. Raeder, H. Baker Hillman.

Prof. Ray Greene Huling, Fitchburg, Mass., F. D. Stone, Librarian Historical Society of Pennsylvania, were elected corresponding members.

The Meteorologist made report for June, July and August, which was received and filed.

E. L. Dana, chairman of committee, to whom was referred the question of observance of the hundredth anniversary of the erection of Luzerne county, submitted a report, which, after discussion, was received and filed.

On motion, the President was authorized to appoint a committee whose duty should be to make the arrangements necessary to put into effect the plans and suggestions embodied in the above report; the President to be chairman of such committee.

J. Ridgway Wright was nominated, upon the recommendation of the Trustees, and duly elected to the office of Recording Secretary.

Calvin Parsons, Esq., read a paper on the early settlement of a portion of Wilkes-Barré township. Mr. Parsons received the thanks of the Society, and the paper was referred to the Publishing Committee.

Quarterly Meeting, December 11, 1885.

There were present, twenty members.

President Dana in the chair.

Contributions to both library and cabinets were read and acknowledged by a vote of thanks of the Society to the several donors.

Correspondence was read as follows: Hon. E. B. Coxe, relating to presentation of history of Wyoming; also, a letter from Isaac A. Chapman, pointing out errors in Johnson's and

Warner's large maps of Pennsylvania; F. D. Stone, Librarian of Pennsylvania Historical Society, accepting election as corresponding member; Ray Greene Huling as above; Prof. John C. Branner, relating to the glaciation of the Wyoming and Lackawanna valleys, also, returning thanks for publications of Society; S. B. Hoyt, relating to manuscript of Rev. Ard. Hoyt; W. H. Van der Smissan, Corresponding Secretary Canadian Institute, desiring an exchange of publications.

J. W. Raeder was elected resident, and James Slocum, of Brownsville, corresponding members, respectively.

The Meteorologist made his report for September, October, and November, 1885, which was received and filed; he also reported the rainfall for September, 1883,-'84,-'85; October, 1883,-'84,-'85; also, November, 1883,-'84,-'85.

Mr. A. H. McClintock presented a short biographical sketch of the Chevalier de la Luserne, at the same time he presented to the Society, in the name of Hon. E. B. Coxe, a portrait of the Chevalier de la Luserne.

Mr. W. P. Ryman read a paper on the early settlement of Dallas township; only half of the original paper being read, Mr. Ryman was requested to continue the reading at the next meeting. The thanks of the Society were voted to Messrs. McClintock and Ryman, and their several papers were referred to the Publishing Committee.

Annual Meeting, February 11th, 1886.

The meeting convened at 11 o'clock A. M.

Present, sixteen members.

President Dana in the chair.

The Society proceeded to the election of officers for the ensuing year. The result of the ballot showed the following gentlemen had received all of votes cast and were, therefore, declared elected:

TRUSTEES:

DR. C. F. INGHAM,	EDWARD P. DARLING,
RALPH D. LACOE,	SHELDON REYNOLDS,
	EDWARD WELLES.

PRESIDENT:

HON. EDMUND L. DANA.

VICE PRESIDENTS:

DR. C. F. INGHAM,	REV. H. L. JONES,
CAPT. CALVIN PARSONS,	HON. ECKLEY B. COXE.

RECORDING SECRETARY:

J. RIDGWAY WRIGHT.

CORRESPONDING SECRETARY AND LIBRARIAN:

SHELDON REYNOLDS.

ASSISTANT LIBRARIAN:

G. MORTIMER LEWIS.

TREASURER:

A. H. McCLINTOCK.

CURATORS:

Conchology and Mineralogy,	DR. C. F. INGHAM.
Archæology,	SHELDON REYNOLDS.
Palæontology,	R. D. LACOE.
Numismatics	REV. H. E. HAYDEN.
Meteorologist,	HON. E. L. DANA.
Historiographer,	GEO. B. KULP.

On motion, the thanks of the Society were tendered to Hon. E. B. Coxe for a picture of the ruins of the Abbey of Luzerne.

George Kelsey Powell, Charles J. Long, Edward E. Hoyt, B. M. Espy, Edward Chahoon, Joshua L. Miner, Joshua L. Welter, Geo. H. Fisher, F. W. Wheaton, G. Adolph Baur, H. H. Welles, Jr., Mrs. Elizabeth R. Ricketts, Hendrick W. Search, Geo. W. Kirkendall, C. A. Belin, Robert D. Evans, Isaac Long, S. J. Whiteman, R. C. Mitchell, W. Drake Loomis, were elected resident members.

On motion, a committee of three, Col. G. M. Reynolds, H. H. Harvey, and J. Ridgway Wright, was appointed to confer with the heirs of the Lee estate and to secure, if possible, the two engravings, one of John Wilkes and one of Isaac Barré.

On motion, Samuel H. Lynch, Esq., of this city, was requested to prepare a paper on his recollections of the old Wilkes-Barré Academy.

On motion, Mr. R. D. Evans was requested to furnish the Society with a copy of a paper prepared by him, showing the business progress in Wilkes-Barré.

On motion, adjourned to 8 o'clock P. M.

ADJOURNED MEETING.

There were present, twenty-three members.

President Dana in the chair.

Correspondence was read: Department of Interior U. S., acknowledging receipt of two hundred volumes of Congressional Globe and Record, to be used in supplying deficiencies in certain libraries; U. S. National Museum, relative to exchange of publications; Prof. J. P. Lesley, in reference to the publication, by the Society, of the report and classification of the fossil-shells of this region by Prof Heilprin, and kindly offering to send the electrotype plates of the fossils; W. A. Thomas, Kingston, Mass., relative to archæological collections; James Slocum, of Brownsville, accepting election as corresponding member.

The Historiographer announced the deaths of Dr. Harrison Wright, J. L. Richardson, Frank Turner, William Frothingham and Thomas Broderick. The papers were received and referred to the Publishing Committee, and a vote of thanks of the Society was tendered to Mr. Kulp.

The report of the Cabinet Committee was read. On motion, it was received and referred to the Publishing Committee. It comprised the following departments:

Library—A. H. MCCLINTOCK, Librarian.

Archæology—SHELDON REYNOLDS, Curator.

Numismatics—H. E. HAYDEN, Curator.

Palæontology—R. D. LACOE, Curator.

Conchology—Dr. C. F. INGHAM, Curator.

The reports of the Meteorologist and of the Treasurer were received and referred to the Publishing Committee.

Mr. W. P. Ryman continued the reading of his paper on the early settlement of Dallas township. On motion, the thanks of the Society were tendered to Mr. Ryman.

The paper on "The Sullivan Road," by Hon. E. L. Dana, was laid over until the next meeting.

REPORTS OF THE TREASURER.

The Treasurer in Account with Wyoming Historical and Geological Society, for the Year Ending February 11, 1885.

<i>Dr.</i>	<i>Cr.</i>
To cash from last Treas.,	
Sheldon Reynolds, . . \$404 75	By stationery, \$ 18 23
" annual dues and en-	" postage, 12 80
" trance fees, 360 00	" books and magazines; 7 00
" rent of rooms (sublett'g) 165 00	" printing and binding
" sale of publications . . 7 25	books and magazines, 128 20
" life membership fee of	" freight and express . . 1 80
F. V. Rockafellow . . 100 00	" gas and fuel 18 75
" life membership fee of	" janitor's wages 6 00
J. H. Swoyer 100 00	" coins purchased 14 12
" life membership fee of	" sundries 15 00
W. L. Conyngham, . . 100 00	" insurance 36 00
	" heliotype certificates . . 59 20
	" contribut'ns to life mem-
	bership fund transfer'd
	to savings acct. 300 00
	" balance 619 90
\$1237 00	\$1237 00

Respectfully submitted;

ANDREW F. DERR, Treas.

The Treasurer in Account with Wyoming Historical and Geological Society, for the Year Ending February 11, 1886.

<i>Dr.</i>	<i>Cr.</i>
To bal. from last report . \$619 90	By rent to April 1, 1885, . \$450 00
" annual dues and entrance fees 385 00	" postage 12 80
" rent of rooms (sublett'g) 254 20	" books and magazines . 7 00
" sale of publications . . . 7 90	" printing and binding publications, etc., . . . 158 50
	" gas and fuel 14 90
	" repairs to rooms of Soc. 11 52
	" designing and engrav'g 19 00
	" coins for Numismatic cabinets 25 00
	" com. paid collectors . 6 50
	" insurance 1885-'86 . . . 36 00
	" sundries 3 35
	" balance 522 43
\$1267 00	\$1267 00

Respectfully submitted,

ANDREW F. DERR, Treas.

CABINET COMMITTEE'S REPORT.—1884-'85.

LIBRARY.

The Librarian of the Society reports that since the annual meeting of February, 1884, the increase of the Library has been as follows:

Bound volumes,	352
Pamphlets,	874
Manuscripts,	5
Maps,	5
Total,	1236

There have also been a number of odd newspapers added, which will materially assist in completing the newspaper

files of the Society. The work has been mainly directed towards a complete overhauling of the books, their re-arrangement and labeling, introductory to the preparation of a card catalogue. The needs of the library are:

1. Enlarged shelf room; the present space is filled to overflowing.
2. More pamphlet cases; the temporary preservation of pamphlets—and they often are of more value than many bound volumes—is only possible through the medium of pamphlet cases.
3. More active effort and personal labor on the part of the members of the Society. The library has grown, and still increases so rapidly that the work of a few members at irregular intervals is insufficient to cope with the accumulated mass of material, and as a library of such proportions can only be generally consulted when properly catalogued, it is of urgent necessity that the members of the Society give their personal aid in the endeavor to make our valuable collection of books of practical usefulness for study, reference, or recreation.

Respectfully submitted,

ANDREW H. MCCLINTOCK, Librarian.

The Librarian of the Society reports that since the annual meeting of February, 1885, the additions to the library have been as follows:

Bound volumes,	497
Pamphlets,	264
Sheets (broadsides),	13
Maps,	1
Manuscripts,	3
 Total additions,	 778

The library has been entirely overhauled since our last report, and the books have been classified on the shelves according to subjects, so that the mass of material which we have been accumulating is now in condition for ready reference, and though we have not been able to perfect our arrangements for a complete card catalogue, the library is so accessible and our stay in the present rooms so limited, it has been thought best to defer the cataloguing until we shall have moved into the Osterhout Library Building. The duplicates, both bound volumes and pamphlets, have been arranged by themselves in a separate room and have been carefully catalogued, with a view of using them for the purpose of exchanging with other societies. The proprietors of the *Record*, since July, 1883, have presented twice a year, complete files of the daily and weekly editions of their paper. These come to us carefully arranged and unfolded, in condition to be immediately handed to the binder. The proprietors of the *News Dealer* and the proprietor of the *Waechter* and *Samstag Abend* also send us, regularly, copies of their papers. We think it proper in this report to express our appreciation of these attentions. The records of the daily occurrences in this region are thus preserved for future generations, and these papers will be of inestimable value to the future historians of our valley. It is to be hoped that the other daily and weekly papers may also be secured in the same manner.

We have begun a series of exchanges with other societies and are endeavoring by this means to complete our sets of their publications.

The library has been open and warmed during the day for the past two months, and it is our purpose to continue having the rooms open; this is becoming more necessary as the library is in constant use by members and others, and the number of persons who refer to our books and records is increasing steadily.

The work which has been done during the past year has been of a permanent nature, and the arrangement is now such that the labor of the future will be more apparent than our efforts in the past. In this connection it is proper to state that Mr. Sheldon Reynolds has been most indefatigable in his attention to the needs of the library, and the Society is indebted to him for the greater part of the improvements here recited.

Respectfully submitted,

ANDREW H. MCCLINTOCK, Librarian.

ARCHÆOLOGY.

It has been the purpose of the management to make this department illustrative of the Archæology of the upper Susquehanna valley ; to gather all that is possible of the remains of the aborigines which tend to elucidate their history and manner of life ; that the objects thus collected and properly classified shall become a source of knowledge where the student may find the means of ascertaining the social condition of the tribes who have left no other record of their existence than is contained in these remains. A collection which exemplifies this subject to a reasonable degree of thoroughness by means of objects obtained within a comparatively limited region, defined by such natural boundaries as would probably mark the territory of the several tribes or nations, would be of much more value and convey more certain intelligence than a larger collection of objects drawn from widely separated localities ; one might engage the attention of the casual observer by a more numerous display of objects, interesting in themselves, but

bearing only a slight relation the one to the other, and very little to any particular tribe of aborigines; the other would appeal to the quick intelligence of the student; the several objects of each class viewed together and in relation to the others, would enable him to form an idea of the domestic life, the rites and customs of burial, the methods of the chase and warfare of one or more homogeneous people whose villages and habitations were co-extensive with the territory from which the collection had been obtained. The knowledge so derived would serve, in a measure, to identify the people, to trace their migrations, and by marking the extent of country inhabited by them, indicate their numerical strength and relative importance.

This collection is, with two unimportant exceptions, local—confined within the limits above indicated—and so far representative in a fair degree, generally, of the articles of ornament, domestic utensils, and weapons of the chase and warfare of the former inhabitants of the region.

During the few years after the organization of the Society, this department was formed by the gift of several small collections and many single objects, the most important of which was the collection presented by the late Judge Ross. Unfortunately this interest did not prove continuous, and many specimens which should have been preserved in the Society's collection, were sent away to other cabinets, or passed into the possession of private collectors of the neighborhood. The preceding five years, however, have witnessed a gratifying increase in the number of desirable specimens, caused in part by the care exercised in bringing to the attention of persons possessing such objects, the fact that the value of single objects is greatly enhanced when associated with a number of similar ones; that in this collection they would remain permanently in the neighborhood where found, and be properly classified and arranged. All the specimens, with one exception, have been acquired by

gift. A record is kept of the localities and conditions under which the specimens were found; also, the names of the donors. The classification is by types, in accordance with the nomenclature of Abbott's Primitive Industry.

The field whence the specimens have been obtained, has been carefully gleaned by many collectors, which has practically exhausted the surface finds; any further additions must be sought through the means of excavations, or by purchase. Some attention has been devoted to the former method, but the expenditure of money involved and time required, has prevented any continued or systematic search. In two instances, however, committees of the Society, at their own expense, have made explorations of this kind and thereby secured a number of rare specimens. The collection of earthenware vessels has been more than doubled through this means. The field for this kind of exploration is comparatively untouched now, and any well-considered effort, begun in time, would doubtless yield a rich return. There are several collections that have been gathered in this vicinity, which it is believed could be secured by purchase; they could be appropriately, and with advantage, consolidated with this collection, and render the whole a cabinet of the first-class and unique in character. It would be a misfortune if, on passing from the possession of the present owners, they should be lost to this collection and locality. The importance of this suggestion is urged upon the attention of the members, and it is earnestly hoped some action may be taken in this behalf.

Thirty-eight specimens have been added during the past year. The following is a list of objects in the cabinet: 22 grooved stone axes; 15 tomahawks; 25 celts; 43 skinning knives; 2 gouges; 77 chipped flint knives; 59 perforators (drills); 25 scrapers; 1 slickstone; 1 sinew dresser; 3 stone mortars, 1 lignumvitae; 5 lapstones; 4 crushers; 25 pestles; 2 large pestles of curious shape; 12 earthenware vessels,

prehistoric, and a half bushel fragments; 15 pieces Zun pottery; 3 pitted stones; 23 chipped flint implements; 2 bone implements; 7 hoe-blades; 3 plummets; 135 net sinkers; 155 spear heads; 1 copper spear head from mound in vicinity; 2400 arrow points; 5 flint daggers; 17 grooved stone club-heads; 20 pipes; 10 discoidal stones; 6 discs, slate and shale; 2 inscribed stones; 1 engraved stone; 8 banner stones; 1 bird-shaped bone; 25 gorgets, totems, etc.; 52 strings beads; 52 hand hammers; 8 rubbing stones; 2 strings wampum; 1 stone last; 4 palaeolithic implements; 1 skin dresser; 2 bows and quivers; 1 canoe. Contents of local shell beds: Half bushel shells; bones of food animals, and fire-stones. Contents of graves: 4 crania; 4 metal vessels; 1 metal thimble; 1 bronze spiral ring; 2 turtle shells, and yellow ochre of several varieties.

Respectfully submitted,

SHELDON REYNOLDS,

Curator of Archæology.

February 11, 1885.

Since the last report there have been added to this cabinet the following: 4 pestles; 2 flaying knives; 1 axe, or tomahawk; 1 one-grooved plummet; 1 stone implement, believed to be a celt or chisel, unique in size, being twenty-two inches long and about four inches wide, ground to an edge at one end and at the other having a shallow transverse groove, for the purpose of fitting a handle; pieces of pottery; 3 spear points, and 55 arrow heads. With the exception of 16 arrow heads, the objects are from this locality, and are a valuable addition to the cabinet.

While the increase of the cabinet during the past year has not been as great in numbers as in certain years, yet the character and rarity of some of the objects quite compensate for any lack of numbers.

As has been said in a previous report, the purpose of the collection is to represent the Archæology of the upper Susquehanna valley and vicinity, and to this section of country the search has been confined. It is a fertile field and has yielded an abundance of relics of the aboriginal; the Society, however, has received but a small proportion of them. Many active private collectors have arisen in competition with the Society, and by means of purchase or solicitation, have obtained various desirable specimens which otherwise would have been given to the Society. While some of these collectors are doubtless well informed in this branch of Archæology, the majority of them, it is believed, seek these objects simply as curiosities, so called, and have no appreciation of their utility as aids to the study of the subject; no record is kept of the locality or condition under which they are found, and thereby they soon become valueless, except as to the very slight interest which may attach to them as the curious relics of an extinct people. Such collectors, in their misguided zeal, are in effect destroying the records by which the student is accustomed to decipher the history of the prehistoric races of this country. It is to be hoped that if these enthusiasts are not willing to place their collections in the keeping of some institution where they may be properly classified and described, they may be prevailed upon at least to exert themselves to make the proper records concerning them. What shall be known of the prehistoric races of America must be learned by means of the remains of those races. The study of this branch of the science of Archæology has advanced with rapid strides in recent years. The work of the Smithsonian Institution, United States Geological Survey, and the Bureau of American Ethnology in this behalf, is too well known to need mention, except, perhaps, to note the fact of their appreciation of the great importance of the subject, which is well shown in their many valuable and beautiful

publications, containing the result of their research and discovery.

Associations of learned men are devoting their time and means in tracing through these remains the story of the people who left no other records. Collections of these objects are being formed in many places; they are carefully preserved, and all the circumstances in relation to them are as carefully ascertained and recorded. In this way the work in one locality supplements and advances the research in another; and what seems an unsolvable problem in one instance, becomes, by reason of examination and comparison, a link in a chain of evidence tending to the corroboration or disproval of some theory or belief. If, therefore, there is any good in American Archæology, these relics, the means of its study and elucidation, are of value, and the associations and individuals who intelligently gather them and render them available for reference and study are doing a commendable work which is sure to be appreciated and acknowledged.

In a community whose early history is so intimately connected with the aboriginal inhabitant, whose literature commemorates so many deeds of heroism, trial, and adventure growing out of this relation, and where can be found many evidences of the Indian occupation, there would seem to be an especial fitness in the collection and preservation of these remains, and thus to contribute all that is possible to the common fund of knowledge of this very interesting science.

Respectfully submitted,

SHELDON REYNOLDS,

Curator of Archæology.

February 11, 1886.

NUMISMATICS.

The Curator reports that there are in the permanent coin cabinet of the Society, the following coins:

United States silver dollars,	20
Half dollars,	89
Quarter dollars,	24
Twenty cents,	5
Dimes,	55
Half dimes,	34
Three cents,	10
Colonials,	10
	247
Copper cents,	177
Half cents,	39
Nickel cents,	39
Nickel five cents,	20
Nickel three cents,	14
Copper two cents,	11
	300
Colonials,	110
Hard times tokens,	69
Advertisement tokens,	85
War tokens,	200
	464

FOREIGN SILVER.

South America,	92
England,	100
France,	50
Swiss,	22
Germany, crowns and half crowns,	60
Germany, smaller pieces, about	1200
	1524

FOREIGN COPPER.

Canada,	200
South America,	70
Europe,	610
England,	320
Early British,	55
Pompeii,	275
Ancient Rome and Greece,	490
	—2020
Medals, copper and silver,	40
Medals, electrotype and white metal,	550
	— 590
Duplicate silver,	25
Copper duplicate, about	1000
Unassorted, about	1000
	—2025
Added, 1884, by purchase,	125
	—
	7285

This estimate may be in excess of the real number, but the duplicates and unassorted, and the small German coins have not been counted.

The history of a country is largely elucidated by its coinage. It is thus important that the American series of coins should be filled up and made as complete as possible without unnecessary expenditure. And, also, that the German principalities, sequestered cities, etc., be more fully represented, especially as these coins are all becoming scarce, and in many cases can only be had by purchase from dealers or at coin sales.

The American coins are made rare by the annual destruction of dies, so that some of the smallest pieces, such as 1802 half-dimes, bring as much as \$150, according to condition. Many of the early and scarce coins that will not cost over \$1 to \$2 apiece are lacking in our cabinet. And

as to the Slavonic coins, while their number is legion, they are daily passing out of circulation and in time will become almost as scarce as the American pieces. The Society, in view of the prospective Osterhout Library, has no real necessity for large expenditures in books; these must come by natural attraction. But the coin cabinet is not so easily filled. I respectfully beg an appropriation of \$50 for the Numismatic department, to be used as is deemed best by the Secretary and the Curator.

The work of classifying the cabinet progresses as rapidly as possible under the circumstances, and a large number of duplicates are on hand for exchange or sale. It is thought best to reduce the number of pieces in the cabinet by a careful sifting out of the best specimens, using the balance in exchange to add those not now in the cabinet.

Respectfully submitted,

HORACE EDWIN HAYDEN,

Curator of Numismatics.

February 11, 1885.

The Curator submits, since the last report, the following additions to the Numismatic cabinet by gift and purchase: Mr. B. Reynolds, 1 United States half-dollar; Mr. S. Reynolds, 6 United States half-dollars; Mr. A. H. McClintock, 1 United States half-dollar and 4 other coins; Mr. John Reichard, 4 United States half-dollars, 16 silver coins and 24 copper coins; Mr. H. Rutter, 1 United States half-dollar, gold; Mr. S. T. Smith, 1 copper half-penny; Rev. Mr. Hayden, 1 medal; by purchase, 5 quarters, 10 dimes, 3 half-dimes; George H. Flanigan, 2 half-dollars and 1 quarter-dollar. In making this report he submits the following suggestions to the consideration of the Society:

While the immediate work of the Society should be confined to those branches which are covered by its name, History and Geology, its valuable numismatic cabinet

should not be neglected. In 1885, the Trustees wisely appropriated the sum of \$25 for the purchase of coins, and this sum was expended in perfecting one set of the United States silver and copper issues, by the purchase of such pieces as cannot be obtained in circulation. Such an appropriation should be made annually.

To the members of the Society this may seem an "expensive luxury," because Numismatics are regarded too much as a mere "boy's hobby," rather than as "the science of coins and medals," as Worcester defines the word.

As an aid to the study of Archaeology and History the Science of Numismatics cannot be overestimated. The history of the coins of a country is the history of its finance; the history of the medals of a country is the record of its leading events. A study of the various coins in circulation as money throughout the thirteen colonies until the establishment of the United States Mint, 1793, and subsequently, will naturally lead the student into an examination of the financial problems of every decade in the history of the country. Merely a glance at the medals issued by the United States Mint will reveal the fact that by especial act of Congress, the United States Mint has struck and issued over fifty bronze medals, each of which commemorates some signal victory of the arms of the United States over its foes from 1775 to 1816. These great events cannot be lost in oblivion so long as these medallic records exist.

This is true of nearly all the large collection of medals in our cabinet; with very few exceptions they are historical, perpetuating the memory of great epochs, or individual incidents in the history of the various countries to which they belong.

It is peculiarly true of the ancient Greek and Roman Empires, that not only recorded events, but many events of importance which find no place in known written history, were made immortal by the issue at the time of coins or

medals, bearing the record of the event, in gold, silver, or base metal.

That the study of Numismatics leads up to higher studies, the writer learned by experience, as he was led to the study of the history of Spain and of the peninsular war, by finding in his cabinet, when a youth, a pistareen of Ferdinand VII, "King of Spain," and one of Joseph Bonaparte, "King of Spain," each bearing the same date, 1808.

As one purpose of this Society is the education of coming generations in the history of this section, and those great events of our land connected therewith, it is our duty to see that each branch of her work should be so fully developed that no facility that would aid the student be neglected.

Respectfully submitted,

HORACE EDWIN HAYDEN,

February 11, 1886.

Curator of Numismatics.

PALÆONTOLOGY.

The Curator of the Palæontological Section, while regretting his inability to give the time and attention to the collection committed to his charge that its importance deserves, begs leave to report: That at the beginning of the two years covered by this report, but little had been done towards classifying the fossils accumulated at that time. Forty-eight species of Carboniferous and one Devonian plant had been named by Prof. Leo Lesquereux, at the time of his visit in 1881. Thirty-two species more have been determined during the past year from the materials on hand, and sixty have been added by donation, which increases the number to one hundred and forty species, belonging to upwards of forty genera. Many of the genera are well represented in their typical species, some of which are very fully illus-

trated by large and fine specimens. A moderate outlay of money and well directed efforts on the part of members and friends of the Society would, in a short time, add greatly to the value and usefulness of your collection, which already compares favorably with the best in the country. I feel it my duty to call attention to the great and irreparable loss to science, occasioned by the closing of so many abandoned mines without proper efforts being made to secure the fossils they contain. The loss is more to be regretted in the high coals which exist in limited areas, and are only worked in few localities that will soon be entirely exhausted. The reports of Profs. Claypole and Heilprin, on animal fossils placed in their hands, will show what has been done in that branch; both reports are herewith published, the latter with plates. With sincere thanks for the assistance and many courtesies received at the hands of the officers and members, I would suggest that much more and better service could be rendered by the selection of a resident of the city to have charge of the Section.

Very respectfully,

R. D. LACOE,
Curator of Palæontology.

February 11, 1886.

MINERALOGY.

The Curator respectfully reports, that during the past year he has gone carefully over the specimens in his charge. He finds that the collection consists of *circa* fifteen hundred specimens representing nearly four hundred different minerals, or about half of those described by Prof. Dana, besides which there are five hundred duplicates, many available for exchange. Nearly all of the most important minerals are represented, some finely, others poorly; an ex-

ception to this statement are Platinum and its accompanying metals of Osmium, Palladium, Iridium, &c., no specimens of which are to be found in our collection.

We need an increase of specimens in our gold and silver ores, especially amalgams, and some manganese, cobalt, ammonia and alumina compounds should be added to make the collection as it stands more evenly balanced. Many groups of minerals are finely represented, as for instance, combinations of the metals, iron, copper, zinc, tin, mercury and lead.

The additions to this department during the past year have been but few in number, only twenty-two specimens, but they were desirable accessions.

An appropriation of at least \$25 should be made to this department during the coming year, for the purpose of securing sets of specimens to represent the physical properties of minerals, such as hardness, specific gravity, color and the like. This appropriation is asked for this purpose now because a number of young boys are becoming interested in the study of mineralogy. Our collections are not merely for show, and their increase should be selected with the express object in view of simplifying study, and of giving every advantage in like cases, and surely no more certain method can be adopted for securing the permanence of our Society, than by showing to the rising generation that it is essentially an educational institution and of practical use.

Respectfully submitted,

HARRISON WRIGHT, Curator.

February 11, 1885.

CONCHOLOGY.

The increase of the cabinet of Conchology since last report has not been as great as in preceding periods, yet some advance is constantly made. Any large accession to the numbers of the specimens would be of little benefit to the public at present, as the entire space available for this department is fully occupied, and will demand in the anticipated new location of a hall a space of not less than double the capacity at present allotted; for there is now stored, but out of view, many specimens, most of which are yet to be classified. In this connection, it is proper to mention the difficulty and delay in the work of classification of these specimens for want of proper books and illustrations on the subject; especially as we are remote from those great standard collections which exist in the cities. At present the only guides we have are two or three small manuals which were donated to the Society; it is therefore recommended that an appropriation by the Society at an early date be made for the purchase of proper standard illustrated works on the subject.

The following tabulation gives the present condition of the cabinet. The arrangement accords with the system adopted by the British association of conchologists, and is followed in the arrangement of the great collection in the British Museum. The basis of the system is that of the anatomical distinctions of the animals belonging to the shells.

The table includes 141 genera and 752 species.

CONTENTS OF CABINET.

CLASS I.—Cephalopoda.	MUREX mesorius.
ORDER I.—Dibanchiata.	M. haustillum.
SECTION A.—Octopoda.	M. ramosus.
FAMILY I.—Argonautidae.	M. brassica.
Argounauta argo.	M. pomum.
SECTION B.—Decapoda.	M. Lalleanus.
FAMILY VI.—Spirulidae.	M. endivia.
Spirula.	M. 5 species undetermined.
ORDER II.—Tetrabranchiata.	TYPIS, undetermined.
FAMILY I.—Nautilidae.	RANELLA caudata.
Nautilus pompilius.	R. granifera.
CLASS II.—Gasteropoda.	R. ventricosa.
ORDER I.—Prosobranchiata.	R. tuberculata.
SECTION A.—Siphonostomata.	R. lampas.
FAMILY I.—Strombidae.	R. albivaricostata.
STROMBUS contiginosus.	R. Buffonia.
S. vitatus.	R. coelata.
S. bubonius.	R. gyrina.
S. auris Diana.	R. margaretula.
S. gibberulus.	R. pustulosa.
S. luhuanus.	R. crumena.
S. plicatus.	R. vexillum.
S. Floridus.	R. 6 species undetermined.
S. granosus.	TRITON tritonis.
S. minimus.	T. variegatus.
S. Canarium.	T. tuberosus.
S. variabilis.	T. cancellatus.
S. alata.	T. rudit.
S. pugilis.	T. cathrata.
S. pyrulatus.	T. 4 species undetermined.
S. 7 species undetermined.	FASCIOLARIA distans.
FAMILY II.—Muricidae.	F. filamentosa.
MUREX pinnatus.	TURBINELLA, undetermined.
M. tenuispina.	T. " "
M. regia.	T. " "
M. palmarosa.	PYRULA paperacea.
M. rarispina.	P. pugillina.
M. inflatus.	P. sub-genus coronata.
M. adustus.	FUSUS cinereus.
M. radix.	F. incisus.
M. Senegalensis.	F. decemcostata.
	F. aciculata.
	F. oblitus.
	F. Islandicus.
	F. colus.
	F. sub-genus incisum.

FAMILY III.—Buccinidae.

BUCCINUM *nasa.*

- B. obsoletum.
- B. vibex.
- B. spirale.
- B. rubiginosum.
- B. papillosum.
- B. undatum.
- B. 2 species undetermined.

TEREBRA *crenulata.*

- T. subulata.
- T. maculata.
- T. dimediatia.
- T. pertusa.

EBURNA *spirata.*

- E. areolata.

NASSA *incrassata.*

- N. mendica.
- N. stolata.
- N. mutabile.
- N. hirata.
- N. nerata.

PURPURA *cataraeta.*

- P. aperta.
- P. capillus.
- P. crispsata.
- P. canaliculata.
- P. saxicola.
- P. lapillus.
- P. carinifera.
- P. armigera.
- P. triangularis.
- P. Peruvianus.
- P. kiosquiformis.
- P. 4 species undetermined.

MONOCEROS *imbricatum.*

- M. crassilabrum.
- M. undetermined.

RICINULA *arachnoides.*

- R. granulata.
- R. horrida.
- R. ricinus.
- R. undetermined.

PLANAXIS *sulcata.*

- P. nigrifella.
- P. undetermined..

CASSIS *granulosa.*

- C. flammea.
- C. testiculus.
- C. erinaceous.
- C. vibex.
- C. undata.
- C. saburon.
- C. 4 species undetermined.

ONISClA *oniscus.*

- O. cancellata.

CASSIDARIA, undetermined.*DOLIUM* *galea.*

- D. pomum.
- D. perdix.
- D. maculatum.
- D. 3 species undetermined.

HARPA *ventricosa.*

- H. nobillis.
- H. undetermined.

COLUMBELLA *mercatoria..*

- C. avara.
- C. Amycla.
- C. scripta.
- C. major.
- C. pallida.
- C. mendecaria.
- C. fulgorans.
- C. rustica.
- C. recurva.
- C. strombiformis.
- C. Bowinii.
- C. 3 species undetermined.

OLIVA *inflata.*

- O. spirata.
- O. gibbosa..
- O. carniola.
- O. Peruviana.
- O. tigrina.
- O. tricolor.
- O. erythrostoma.
- O. porphyra.
- O. 3 species undetermined.
- O. baetica.
- O. sub-genus biplicata.
- O. " " jaspidae.
- O. " " oriza.
- O. 13 species undetermined..

ANNULARIA , undetermined.	CYPRÆA obvelata.
FAMILY IV.—Conidae.	<i>C. talpa.</i> <i>C. tigris.</i> <i>C. lynx.</i> <i>C. mauretana.</i> <i>C. mappa.</i> <i>C. carniola.</i> <i>C. vitellus.</i> <i>C. caurica.</i> <i>C. eburnea.</i> <i>C. moneta.</i> <i>C. erosa.</i> <i>C. Isabella.</i> <i>C. Arabica.</i> <i>C. arenosa.</i> <i>C. 13 species undetermined.</i>
CONUS marmoreus.	OVULUM verucosum.
<i>C. hebraeus.</i>	<i>O. ovum.</i>
<i>C. flavidus.</i>	<i>O. volva.</i>
<i>C. quercinus.</i>	ERATO laevis.
<i>C. textilis.</i>	SECTION B.—Holostomata.
<i>C. imperiallis.</i>	FAMILY I.—Naticidæ.
<i>C. arenatus.</i>	NATICA mamilla.
<i>C. publicarius.</i>	<i>N. duplicata.</i>
<i>C. eburneus.</i>	<i>N. lineata.</i>
<i>C. striatus.</i>	<i>N. heros.</i>
<i>C. geographus.</i>	<i>N. stercus.</i>
<i>C. tesselatus.</i>	<i>N. albumen.</i>
<i>C. lithoglyphus.</i>	<i>N. millepunctata.</i>
<i>C. nebulosus.</i>	<i>N. melanostoma.</i>
<i>C. 10 species undetermined.</i>	<i>N. lineata.</i>
PLEURATOMA nodifera.	<i>N. 5 species undetermined.</i>
<i>P. mitraeformis.</i>	SEGARETUS perspectivus.
<i>P. marmorata.</i>	FAMILY III.—Cerithiadæ.
<i>P. oxytropis.</i>	CERITHIUM nodulosum.
<i>P. grandis.</i>	<i>C. reticulatum.</i>
<i>P. 2 species undetermined.</i>	<i>C. morus.</i>
FAMILY V.—Volutidae.	<i>C. filosum.</i>
VOLUTA musica.	<i>C. vertagus.</i>
<i>V. vespertilio.</i>	<i>C. adansoni.</i>
<i>V. undetermined.</i>	<i>C. lineatus.</i>
CYMBA proboscidalis.	<i>C. obeliscum.</i>
<i>C. undetermined.</i>	<i>C. versicolor.</i>
MITRA episcopalalis.	<i>C. uncinatum.</i>
<i>M. ferruginea.</i>	<i>C. atratum.</i>
<i>M. cuçumerina.</i>	<i>C. ocellatum.</i>
<i>M. scutulata.</i>	<i>C. adustum.</i>
<i>M. cardinalis.</i>	
<i>M. pauperula.</i>	
<i>M. Caffra.</i>	
<i>M. exasperata.</i>	
<i>M. melaniana.</i>	
<i>M. conica.</i>	
<i>M. flammea.</i>	
<i>M. 2 species undetermined.</i>	
MARGINELLA primum.	
FAMILY VI.—Cypræidæ.	
CYPRÆA Europa.	
<i>C. pallida.</i>	
<i>C. caput-serpentis.</i>	

<i>C. vulgatum.</i>	<i>PHORUS conchiphorus.</i>
<i>C. aluco.</i>	<i>P. solarus.</i>
<i>C. telescopium.</i>	<i>P. indens.</i>
<i>C. sub-genus filosum,</i>	
<i>C. " " munita.</i>	<i>LACUNA porecta.</i>
<i>C. 9 species undetermined.</i>	<i>L. variagata.</i>
POTAMIDES , undetermined.	TRUNCATELLA corrugata.
<i>P.</i> " "	FAMILY VII.—Paludinidæ.
<i>P.</i> " "	PALUDINA vivipera.
<i>P. sub-genus macroptera.</i>	<i>P. ponderosa.</i>
<i>P. " " negrescens.</i>	
STRUTHOLARIA noduloso.	AMPULARIA guyanensis.
FAMILY IV.—Melaniadæ.	<i>A. depressa.</i>
MELANIA fasciolata.	<i>A. cornu arietas.</i>
<i>M. acula.</i>	<i>A. sub-genus olivaceous.</i>
<i>M. varicosa.</i>	
<i>M. sitosa.</i>	FAMILY VIII.—Neritidæ.
<i>M. lineolatus.</i>	NERITA peloronta.
<i>M. sub-genus pyramus.</i>	<i>N. marginata.</i>
<i>M. " " atra.</i>	<i>N. yoldi.</i>
PALUDOMUS maculatus.	<i>N. plicata.</i>
MELANOPSIS Zelandica.	<i>N. polita.</i>
FAMILY V.—Turritellidæ.	<i>N. albicella.</i>
TURRITELLA radula.	<i>N. 18 species undetermined.</i>
<i>T. duplicata.</i>	
<i>T. tigrina.</i>	NERITINA viridis.
<i>T. 2 species undetermined.</i>	<i>N. crepidularia.</i>
SCALARIA multistriatum.	<i>N. cariosa.</i>
<i>S. pretiosa.</i>	<i>N. cryscolla.</i>
<i>S. 2 species undetermined.</i>	<i>N. granosa.</i>
VERMETUS lumbriticatus.	
FAMILY VI.—Littorinidæ.	FAMILY IX.—Turbinidæ.
LITTORINA rufis.	TURBO tesselatus.
<i>L. litorales.</i>	<i>T. cornutis.</i>
<i>L. scutulata.</i>	<i>T. versicolor.</i>
<i>L. planaxis.</i>	<i>T. rugosus.</i>
<i>L. palliata.</i>	<i>T. pelthiolarus.</i>
<i>L. scabra.</i>	<i>T. opolus.</i>
<i>L. conica.</i>	<i>T. ater.</i>
<i>L. zebra.</i>	<i>T. saxosus.</i>
<i>L. ziczac.</i>	<i>T. pagodus.</i>
<i>L. sub-genus unidens.</i>	<i>T. 7 species undetermined.</i>
<i>L. 2 species undetermined.</i>	
SOLARIUM perspectivum.	IMPERATOR semicastator.
	TROCHUS umbilicatus.
	<i>T. cinerareus.</i>
	<i>T. exigeus.</i>
	<i>T. Niloticus.</i>
	<i>T. obeliscus.</i>
	<i>T. cœlatus.</i>
	<i>T. marmoreus.</i>

TROCHUS intextus.	PATELLA vulgata.
T. caerulescens.	P. miniata.
T. funebral.	P. instabilis.
T. maculatus.	P. 11 species undetermined.
T. ziziphinus.	
T. sub-genus pupilla.	
T. " " distortus.	
T. 5 species undetermined.	
ROTELLA lineolata.	ACMÆA persona.
R. elegans.	A. mitra.
MONODONTO villanus.	SIPHONARIA amara.
DELPHINULA lancinatum.	FAMILY XIV.—Dentallidæ.
D. sub-genus foliatum.	DENTALIUM elephantum.
D. undetermined.	D. pretiosum.
FAMILY X.—Haliotis.	FAMILY XV.—Chitonidæ.
HALIOTIS, undetermined.	CHITON squamosis.
H. "	C. Cumingii.
PLEURATOMARIA nodifera.	C. 2 species undetermined.
P. mitraformis.	ORDER II.—Pulmonifera.
P. marmorata.	SECTION A.—Inoperculata.
P. oxytropis.	FAMILY I.—Helicidae.
P. grandis.	HELIX cisticola.
P. 2 species undetermined.	H. demorallis.
IANTHINA fragilis.	H. aspersa.
FAMILY XI.—Fissurellidæ.	H. albolabra.
FISSURELLA reticulata.	H. tridentata.
F. eratica.	H. veridostrata.
F. 6 species undetermined.	H. epistylum.
EMARGINULA reticulata.	H. Listerii.
FAMILY XII.—Calyptreidæ.	H. Owenii.
CALYPTRÆ, undetermined.	H. Caffra.
C. crucibulum.	H. caracolla.
C. sinensis.	H. mirabilis.
CREPIDULUM dilata.	H. confuso.
C. fornicata.	H. seccernuda.
C. dorsata.	H. laxata.
C. navicella.	H. 7 species undetermined.
C. adunca.	BULIMUS densis.
HIPPONIX cranioides.	B. Niallatus.
FAMILY XIII.—Patellidæ.	B. pythogaster.
PATELLA daurata.	B. Adansonii.
P. sagittata.	B. virgatus.
P. testudinaria.	B. Mindorensis.
	B. oblongus.
	B. 3 species undetermined.
	ACATINA granulata.
	A. Virginea.
	A. sub-genus lanahells.
	PUPA, undetermined.

FAMILY IV.— <i>Limnaeidae.</i>	CLASS V.— <i>Conchifera.</i>
<i>PHYSA</i> , 3 species undetermined.	SECTION A.— <i>Asiphonida.</i>
<i>PLANORBIS</i> <i>corpulentis.</i>	FAMILY I.— <i>Ostreidæ.</i>
<i>P. bicornatus.</i>	<i>OSTREA</i> indet.
<i>P. 4 species undetermined.</i>	<i>O. sub-genus plica.</i>
FAMILY V.— <i>Auriculidae.</i>	<i>O. 3 species undetermined.</i>
<i>AURICULA</i> <i>bidentata.</i>	ANOMIA <i>ephippium.</i>
<i>A. metalica.</i>	<i>A. black.</i>
<i>A. sub-genus pollex.</i>	PLACUNA <i>placenta.</i>
<i>CONOVULUS</i> <i>luteus.</i>	PECTEN <i>dislocatus.</i>
SECTION B.— <i>Operculata.</i>	<i>P. nodosus.</i>
FAMILY VI.— <i>Cyclostomidae.</i>	<i>P. rubidus.</i>
<i>CYCLOSTOMA</i> <i>semistriatum.</i>	<i>P. hostatus.</i>
<i>C. omphalotropis.</i>	<i>P. sinensis.</i>
ORDER III— <i>Opistho-branchiata</i>	<i>P. ziczac.</i>
SECTION B.— <i>Nudibranchiata.</i>	<i>P. Japanicus.</i>
FAMILY II.— <i>Bullidæ.</i>	<i>P. radula.</i>
<i>BULLA</i> <i>naucum.</i>	<i>P. irradians.</i>
<i>B. striata.</i>	<i>P. concava.</i>
<i>B. albocinota.</i>	<i>P. Jacobaeus.</i>
<i>B. 2 species undetermined.</i>	<i>P. 5 species undetermined.</i>
<i>APLUSTRUM</i> <i>thalassiarachim.</i>	LIMA, 1 species undetermined.
FAMILY VII.— <i>Tritoniadæ.</i>	SONDYLUS <i>imperiallis.</i>
<i>TRITON</i> <i>tritensis.</i>	PLICATULA, 1 species undeterm'ed
<i>T. variegatus.</i>	FAMILY II.— <i>Aviculidae.</i>
<i>T. tuberosus.</i>	<i>AVICULA</i> <i>bidentata.</i>
<i>T. cancellatus.</i>	<i>A. sub-genus albus.</i>
<i>T. rudis.</i>	<i>A. " " margaritifa.</i>
<i>T. pileare.</i>	<i>A. 2 species undetermined.</i>
<i>T. vestitum.</i>	AVICULA-PECTEN, 1 species unde'd
<i>T. corrugatum.</i>	PERNA <i>ephippium.</i>
<i>T. nodiferous.</i>	<i>P. petibulun.</i>
<i>T. lotorium.</i>	PINNA <i>muricata.</i>
<i>T. cathrata.</i>	FAMILY III.— <i>Mytilidae.</i>
<i>T. chlorostoma.</i>	MYTILUS <i>perna.</i>
<i>T. 2 species undetermined.</i>	<i>M. edulis.</i>
CLASS IV.— <i>Brachiopoda.</i>	<i>M. chonos.</i>
FAMILY II.— <i>Spiriferidæ</i>	<i>M. 1 species undetermined.</i>
<i>SPIRIFER</i> <i>Peronii.</i>	MODIOLA <i>castanea.</i>
	<i>M. dimisus.</i>
	<i>M. lithophaga.</i>
	<i>M. castanea.</i>

FAMILY IV.—Arcadae.	<i>LUCINA punctata.</i> <i>L. radula.</i> <i>L. boreallis.</i>
ARCA pexata.	<i>KELLIA cumata.</i>
<i>A. incongrua.</i>	FAMILY XII.—Cyclidae.
<i>A. Noae.</i>	<i>CYCLAS transversam.</i>
<i>A. lactea.</i>	<i>C. sub-genus striatinum.</i>
<i>A. loricata.</i>	
<i>A. semitorta.</i>	<i>CYRENE tenebrosa.</i>
<i>A. 3 species undetermined.</i>	FAMILY XIII.—Cyprinidae.
PECTUNCULUS, 1 species undeter'd.	
NUCULA, 1 species undetermined.	CIRCE castrensis.
FAMILY VI.—Unionidae.	<i>C. 1 species undetermined.</i>
UNIO heterodon.	ASTARTE castanea.
<i>U. complanatus.</i>	ISOCARDIA vulgaris.
<i>U. radicatus.</i>	CYPRICARDIA obesa.
<i>U. gracilis.</i>	CARDITA antiquata.
<i>U. undulata.</i>	<i>C. laticosta.</i>
<i>U. pupilla.</i>	<i>C. affinis.</i>
<i>U. margaritifera.</i>	<i>C. crassescosta.</i>
SECTION B.—Siphonida, Integro-pallialia.	<i>C. sub-genus imbricata.</i>
FAMILY VII.—Chamidae.	SECTION C.—Siphonidae; sinu-pallalia.
CHAMA arcinella.	FAMILY XIV.—Veneridae.
<i>C. cristella.</i>	VENUS Sayii.
<i>C. 2 species undetermined.</i>	<i>V. paphia.</i>
FAMILY IX.—Tridacnidae.	<i>V. geographica.</i>
TRIDACNA squamosa.	<i>V. notata.</i>
<i>T. sub-genus maculata.</i>	<i>V. reticulata.</i>
FAMILY X.—Cardiidae.	<i>V. ovata.</i>
CARDIUM muricatum.	<i>V. flexuoso.</i>
<i>C. magnum.</i>	<i>V. faciata.</i>
<i>C. costata.</i>	<i>V. cancellata.</i>
<i>C. edule.</i>	<i>V. grata.</i>
<i>C. corbis.</i>	<i>V. squalidus.</i>
<i>C. sublineatum.</i>	<i>V. subrugosa.</i>
<i>C. unedo.</i>	<i>V. 5 species undetermined.</i>
<i>C. cardissa.</i>	
<i>C. 3 species undetermined.</i>	CYTHEREA concentrica.
FAMILY XI.—Lucinidae.	<i>C. dione.</i>
LUCINA undata.	<i>C. erycina.</i>
<i>L. divaricata.</i>	ARTEMIS discus.
<i>L. Pennsylvanica.</i>	<i>A. 1 species undetermined.</i>
<i>L. tigrina.</i>	LUCINOPSIS tenuis.
	<i>L. Chinaensis.</i>

TAPES pulastra.	GALATEA, 1 species undetermined.
T. staminea.	DONAX varcibilis.
T. obesa.	D. Californicus.
FAMILY XV.—Mactridae.	D. sub-genus Braziliensis.
MACTRA lateralis.	FAMILY XVII.—Solenidae.
M. stultorem.	SOLEN ensis.
M. solida.	S. veridis.
M. alba.	S. minuta.
M. 3 species undetermined.	SOLECURTUS radiata.
LUTRARIA canaliculata.	CAPSULA rugosa.
L. lineata.	FAMILY XVIII.—Myacidae.
L. eliptica.	MYA, 1 species undetermined.
L. 1 species undetermined.	CORBULA labiata.
FAMILY XVI.—Tellinidae.	C. nucleus.
TELLINA polita.	FAMILY XIX.—Anatinidae.
T. incera.	THRACIA pubescens.
T. linguafelis.	FAMILY XX.—Gastrochaenidae
T. alternata.	SAXICAVA rugosa.
T. angulata.	ASPEAGILLUM vaginiformis.
T. galathea.	FAMILY XXI.—Pholadidae.
T. laevigata.	PHOLAS costata.
T. scobinata.	TEAEDO navalis.
T. pumicea.	
T. 3 species undetermined.	
PSAMOBIA diphos.	
AMPHIDESMA flavescentia.	
A. 1 species undetermined.	

Respectfully submitted,

February 11, 1886.

CHARLES F. INGHAM,
Curator of Conchology.

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 (Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 46'$)

Meteorological Observations taken at Wilkes-Barre, Pa., for February, 1884, by E. L. Dana.
 (Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 46' 6.6''$)

THERMOMETER.		BAROMETER.		REMARKS.	
Day.	Night.	Wind.	Wind.	Clouds.	Clouds.
7 A.M.	9 P.M.	6 P.M.	6 A.M.	Clouds.	Clouds.
1 13 26	1 13 26	6 C. Cu.	2 N.	24 o	W. 11 1/2
2 12 25	2 12 25	Cu. S.	1 W.	25 23 1/2	o Cir.
3 11 24	3 11 24	ro Str.	1 W.	29 43 7/8	1 W.
4 10 23	4 10 23	ro Nimb.	o	29 67 2/8	1 W.
5 9 22	5 9 22	ro Str.	1 E.	29 64 7/8	9 Nimb.
6 8 21	6 8 21	ro Nimb.	1 W.	29 64 7/8	10 Nimb.
7 7 20	7 7 20	Fog & R.	1 S.	29 37 3/8	2 Cir.
8 6 19	8 6 19	Fog & R.	1 S.W.	29 37 3/8	Fog.
9 5 18	9 5 18	ro Nimb.	1 E.	29 49 1/2	5 Cir.
10 4 17	10 4 17	ro Nimb.	1 W.	29 49 1/2	1 N. E.
11 3 16	11 3 16	ro Nimb.	2 S.	29 33 3/8	10 Cu. S.
12 2 15	12 2 15	ro Cu. S.	1 S.	35 35 3/8	ro Nimb.
13 1 14	13 1 14	ro Cu. S.	1 E.	33 4	4 Cir.
14 0 13	14 0 13	ro Cu. S.	1 S.E.	29 31 7/8	4 Cir.
15 29	15 29	ro Fog.	1 S.W.	20 72 30 19	8 Nimb.
16 28	16 28	ro Fog.	1 S.	20 25 72	20 23 7/8
17 27	17 27	ro Fog.	1 N.	21 15 72	15 87 7/8
18 26	18 26	ro Fog.	1 N. E.	21 49 72	29 73 7/8
19 25	19 25	ro Fog.	2 N.	22 49 72	68 82 29 73
20 24	20 24	ro Fog.	2 S.	22 49 72	68 82 29 73
21 23	21 23	ro Fog.	2 E.	22 49 72	68 82 29 73
22 22	22 22	ro Fog.	3 N.	22 49 72	68 82 29 73
23 21	23 21	ro Fog.	3 S.	22 49 72	68 82 29 73
24 20	24 20	ro Fog.	3 W.	22 49 72	68 82 29 73
25 19	25 19	ro Fog.	4 N.	22 49 72	68 82 29 73
26 18	26 18	ro Fog.	4 S.	22 49 72	68 82 29 73
27 17	27 17	ro Fog.	5 N.	22 49 72	68 82 29 73
28 16	28 16	ro Fog.	5 S.	22 49 72	68 82 29 73
29 15	29 15	ro Fog.	5 W.	22 49 72	68 82 29 73
30 14	30 14	ro Fog.	6 N.	22 49 72	68 82 29 73
31 13	31 13	ro Fog.	6 S.	22 49 72	68 82 29 73
32 12	32 12	ro Fog.	6 W.	22 49 72	68 82 29 73
33 11	33 11	ro Fog.	7 N.	22 49 72	68 82 29 73
34 10	34 10	ro Fog.	7 S.	22 49 72	68 82 29 73
35 9	35 9	ro Fog.	7 W.	22 49 72	68 82 29 73
36 8	36 8	ro Fog.	8 N.	22 49 72	68 82 29 73
37 7	37 7	ro Fog.	8 S.	22 49 72	68 82 29 73
38 6	38 6	ro Fog.	8 W.	22 49 72	68 82 29 73
39 5	39 5	ro Fog.	9 N.	22 49 72	68 82 29 73
40 4	40 4	ro Fog.	9 S.	22 49 72	68 82 29 73
41 3	41 3	ro Fog.	9 W.	22 49 72	68 82 29 73
42 2	42 2	ro Fog.	10 N.	22 49 72	68 82 29 73
43 1	43 1	ro Fog.	10 S.	22 49 72	68 82 29 73
44 0	44 0	ro Fog.	10 W.	22 49 72	68 82 29 73
45 21	45 21	ro Cu. S.	1 N.	22 49 72	68 82 29 73
46 20	46 20	ro Cu. S.	1 S.	22 49 72	68 82 29 73
47 19	47 19	ro Cu. S.	1 E.	22 49 72	68 82 29 73
48 18	48 18	ro Cu. S.	1 W.	22 49 72	68 82 29 73
49 17	49 17	ro Cu. S.	2 N.	22 49 72	68 82 29 73
50 16	50 16	ro Cu. S.	2 S.	22 49 72	68 82 29 73
51 15	51 15	ro Cu. S.	2 E.	22 49 72	68 82 29 73
52 14	52 14	ro Cu. S.	3 N.	22 49 72	68 82 29 73
53 13	53 13	ro Cu. S.	3 S.	22 49 72	68 82 29 73
54 12	54 12	ro Cu. S.	3 W.	22 49 72	68 82 29 73
55 11	55 11	ro Cu. S.	4 N.	22 49 72	68 82 29 73
56 10	56 10	ro Cu. S.	4 S.	22 49 72	68 82 29 73
57 9	57 9	ro Cu. S.	4 W.	22 49 72	68 82 29 73
58 8	58 8	ro Cu. S.	5 N.	22 49 72	68 82 29 73
59 7	59 7	ro Cu. S.	5 S.	22 49 72	68 82 29 73
60 6	60 6	ro Cu. S.	5 W.	22 49 72	68 82 29 73
61 5	61 5	ro Cu. S.	6 N.	22 49 72	68 82 29 73
62 4	62 4	ro Cu. S.	6 S.	22 49 72	68 82 29 73
63 3	63 3	ro Cu. S.	6 W.	22 49 72	68 82 29 73
64 2	64 2	ro Cu. S.	7 N.	22 49 72	68 82 29 73
65 1	65 1	ro Cu. S.	7 S.	22 49 72	68 82 29 73
66 0	66 0	ro Cu. S.	7 W.	22 49 72	68 82 29 73
67 22	67 22	ro Nimb.	2 N.	22 49 72	68 82 29 73
68 21	68 21	ro Nimb.	2 S.	22 49 72	68 82 29 73
69 20	69 20	ro Nimb.	2 E.	22 49 72	68 82 29 73
70 19	70 19	ro Nimb.	3 N.	22 49 72	68 82 29 73
71 18	71 18	ro Nimb.	3 S.	22 49 72	68 82 29 73
72 17	72 17	ro Nimb.	3 W.	22 49 72	68 82 29 73
73 16	73 16	ro Nimb.	4 N.	22 49 72	68 82 29 73
74 15	74 15	ro Nimb.	4 S.	22 49 72	68 82 29 73
75 14	75 14	ro Nimb.	4 W.	22 49 72	68 82 29 73
76 13	76 13	ro Nimb.	5 N.	22 49 72	68 82 29 73
77 12	77 12	ro Nimb.	5 S.	22 49 72	68 82 29 73
78 11	78 11	ro Nimb.	5 W.	22 49 72	68 82 29 73
79 10	79 10	ro Nimb.	6 N.	22 49 72	68 82 29 73
80 9	80 9	ro Nimb.	6 S.	22 49 72	68 82 29 73
81 8	81 8	ro Nimb.	6 W.	22 49 72	68 82 29 73
82 7	82 7	ro Nimb.	7 N.	22 49 72	68 82 29 73
83 6	83 6	ro Nimb.	7 S.	22 49 72	68 82 29 73
84 5	84 5	ro Nimb.	7 W.	22 49 72	68 82 29 73
85 4	85 4	ro Nimb.	8 N.	22 49 72	68 82 29 73
86 3	86 3	ro Nimb.	8 S.	22 49 72	68 82 29 73
87 2	87 2	ro Nimb.	8 W.	22 49 72	68 82 29 73
88 1	88 1	ro Nimb.	9 N.	22 49 72	68 82 29 73
89 0	89 0	ro Nimb.	9 S.	22 49 72	68 82 29 73
90 22	90 22	ro Nimb.	9 W.	22 49 72	68 82 29 73
91 21	91 21	ro Nimb.	10 N.	22 49 72	68 82 29 73
92 20	92 20	ro Nimb.	10 S.	22 49 72	68 82 29 73
93 19	93 19	ro Nimb.	10 W.	22 49 72	68 82 29 73
94 18	94 18	ro Nimb.	11 N.	22 49 72	68 82 29 73
95 17	95 17	ro Nimb.	11 S.	22 49 72	68 82 29 73
96 16	96 16	ro Nimb.	11 W.	22 49 72	68 82 29 73
97 15	97 15	ro Nimb.	12 N.	22 49 72	68 82 29 73
98 14	98 14	ro Nimb.	12 S.	22 49 72	68 82 29 73
99 13	99 13	ro Nimb.	12 W.	22 49 72	68 82 29 73
100 12	100 12	ro Nimb.	13 N.	22 49 72	68 82 29 73
101 11	101 11	ro Nimb.	13 S.	22 49 72	68 82 29 73
102 10	102 10	ro Nimb.	13 W.	22 49 72	68 82 29 73
103 9	103 9	ro Nimb.	14 N.	22 49 72	68 82 29 73
104 8	104 8	ro Nimb.	14 S.	22 49 72	68 82 29 73
105 7	105 7	ro Nimb.	14 W.	22 49 72	68 82 29 73
106 6	106 6	ro Nimb.	15 N.	22 49 72	68 82 29 73
107 5	107 5	ro Nimb.	15 S.	22 49 72	68 82 29 73
108 4	108 4	ro Nimb.	15 W.	22 49 72	68 82 29 73
109 3	109 3	ro Nimb.	16 N.	22 49 72	68 82 29 73
110 2	110 2	ro Nimb.	16 S.	22 49 72	68 82 29 73
111 1	111 1	ro Nimb.	16 W.	22 49 72	68 82 29 73
112 0	112 0	ro Nimb.	17 N.	22 49 72	68 82 29 73
113 22	113 22	ro Nimb.	17 S.	22 49 72	68 82 29 73
114 21	114 21	ro Nimb.	17 W.	22 49 72	68 82 29 73
115 20	115 20	ro Nimb.	18 N.	22 49 72	68 82 29 73
116 19	116 19	ro Nimb.	18 S.	22 49 72	68 82 29 73
117 18	117 18	ro Nimb.	18 W.	22 49 72	68 82 29 73
118 17	118 17	ro Nimb.	19 N.	22 49 72	68 82 29 73
119 16	119 16	ro Nimb.	19 S.	22 49 72	68 82 29 73
120 15	120 15	ro Nimb.	19 W.	22 49 72	68 82 29 73
121 14	121 14	ro Nimb.	20 N.	22 49 72	68 82 29 73
122 13	122 13	ro Nimb.	20 S.	22 49 72	68 82 29 73
123 12	123 12	ro Nimb.	20 W.	22 49 72	68 82 29 73
124 11	124 11	ro Nimb.	21 N.	22 49 72	68 82 29 73
125 10	125 10	ro Nimb.	21 S.	22 49 72	68 82 29 73
126 9	126 9	ro Nimb.	21 W.	22 49 72	68 82 29 73
127 8	127 8	ro Nimb.	22 N.	22 49 72	68 82 29 73
128 7	128 7	ro Nimb.	22 S.	22 49 72	68 82 29 73
129 6	129 6	ro Nimb.	22 W.	22 49 72	68 82 29 73
130 5	130 5	ro Nimb.	23 N.	22 49 72	68 82 29 73
131 4	131 4	ro Nimb.	23 S.	22 49 72	68 82 29 73
132 3	132 3	ro Nimb.	23 W.	22 49 72	68 82 29 73
133 2	133 2	ro Nimb.	24 N.	22 49 72	68 82 29 73
134 1	134 1	ro Nimb.	24 S.	22 49 72	68 82 29 73
135 0	135 0	ro Nimb.	24 W.	22 49 72	68 82 29 73
136 22	136 22	ro Nimb.	25 N.	22 49 72	68 82 29 73
137 21	137 21	ro Nimb.	25 S.	22 49 72	68 82 29 73
138 20	138 20	ro Nimb.	25 W.	22 49 72	68 82 29 73
139 19	139 19	ro Nimb.	26 N.	22 49 72	68 82 29 73
140 18	140 18	ro Nimb.	26 S.	22 49 72	68 82 29 73
141 17	141 17	ro Nimb.	26 W.	22 49 72	68 82 29 73
142 16	142 16	ro Nimb.	27 N.	22 49 72	68 82 29 73
143 15	143 15	ro Nimb.	27 S.	22 49 72	68 82 29 73
144 14	144 14	ro Nimb.	27 W.	22 49 72	68 82 29 73
145 13	145 13	ro Nimb.	28 N.	22 49 72	68 82 29 73
146 12	146 12	ro Nimb.	28 S.	22 49 72	68 82 29 73
147 11	147 11	ro Nimb.	28 W.	22 49 72	68 82 29 73
148 10	148 10	ro Nimb.	29 N.	22 49 72	68 82 29 73
149 9	149 9	ro Nimb.	29 S.	22 49 72	68 82 29 73
150 8	150 8	ro Nimb.	29 W.	22 49 72	68 82 29 73
151 7	151 7	ro Nimb.	30 N.	22 49 72	68 82 29 73
152 6	152 6	ro Nimb.	30 S.	22 49 72	68 82 29 73
153 5	153 5	ro Nimb.	30 W.	22 49 72	68 82 29 73
154 4	154 4	ro Nimb.	31 N.	22 49 72	68 82 29 73
155 3	155 3	ro Nimb.	31 S.	22 49 72	68 82 29 73
156 2	156 2	ro Nimb.	31 W.	22 49 72	68 82 29 73
157 1	157 1	ro Nimb.	32 N.	22 49 72	68 82 29 73
158 0	158 0	ro Nimb.	32 S.	22 49 72	68 82 29 73
159 22	159 22	ro Nimb.	32 W.	22 49 72	68 82 29 73
160 21	160 21	ro Nimb.	33 N.	22 49 72	68 82 29 73
161 20	161 20	ro Nimb.	33 S.	22 49 72	68 82 29 73
162 19	162 19	ro Nimb.	33 W.	22 49 72	68 82 29 73
163 18	163 18	ro Nimb.	34 N.	22 49 72	68 82 29 73
164 17	164 17	ro Nimb.	34 S.	22 49 72	68 82 29 73
165 16	165 16	ro Nimb.	34 W.	22 49 72	68 82 29 73
166 15	166 15	ro Nimb.	35 N.	22 49 72	68 82 29 73
167 14	167 14	ro Nimb.	35 S.	22 49 72	68 82 29 73
168 13	168 13	ro Nimb.	35 W.	22 49 72	68 82 29 73
169 12	169 12	ro Nimb.	36 N.	22 49 72	68 82 29 73
170 11	170 11	ro Nimb.	36 S.	22 49 72	68 82 29 73
171 10	171 10	ro Nimb.	36 W.	22 49 72	68 82 29 73
172 9	172 9	ro Nimb.	37 N.	22 49 72	68 82 29 73
1					

Meteorological Observations taken at Wilkes-Barre, Pa., for March, 1884, by E. L. Dana.
 (Latitude $41^{\circ} 14' 40.4''$)
 (Longitude West $10^{\circ} 10' 4.6''$)

Day.	THERMOMETER.			BAROMETER.			REMARKS.		
	Clouds.	Wind.	Temp.	Clouds.	Wind.	Temp.	Clouds.	Wind.	Temp.
1	3 o	E.	18	I. Cir. Cu. 2 W.	9 8/4	1 Cir.	1 N. E.	29-22 75 29-30 14 74	2. Show last night and to-day 1 in. + river closed last night 6 ft. +
2	22 to Nimb.	N.	32	2 Cir. N. E.	23 2/2	10 Cir.	2 N. E.	29-04 62 29-03 75 20-92 72	3. S. last night in. + to-day ½ in., melted.
3	14 3 Cir.	O	22 10 Nimb.	11 N. E.	14 16	0	1 S. W.	28-96 65 28-96 79 29-28 75	4. On river pier 5 ½ ft.
4	5 9	W.	21	I. Cir. Cu. 2 N.	9 11	5 Cir. S.	2 N.	29-50 69 29-53 82 29-34 74	5. Snowing afternoon and evening.
5	6 24	I. N.	29 10 Nimb.	1 S. 22 20 ½	22 2/2	5 Cir. S.	2 N.	29-40 72 29-46 85 20-52 74	6. 1 ½ in. + melted. 17. river 5 ½ ft. + .17 in.
6	7 27	I. S.	37 10 Nimb.	I. E. 27 28 ½	4 Cir.	1 N.	29-54 74 29-59 82 29-50 75	7. Slight R. freezing A. M.; raining P. M.	
7	8 31	I. N. E.	36 10 Nimb.	1 S. 29 33 ½	10 Nimb.	2 N.	29-54 74 29-59 82 29-50 75	8. Rain fall yesterday and night 1.26; rain fall 2 P. M. .03	
9	9 20	I. Cir. S.	32 10 Cu. S.	1 N. 29 33 ½	10 Nimb.	1 N.	29-38 74 29-39 78 29-33 74	9. Rain fall yesterday and last night .39;	
10	10 21	Cu.	33 1 Cir.	2 N.	24 25 ½	1 Cir.	2 N.	29-60 68 29-63 74 29-70 74	10. Snow to-day 1 ½ in.
11	11 28	Str.	2 S. W.	41 9 Cu.	2 S.	38 36 ½	10 Nimb.	29-60 74 29-49 78 29-45 78	11. Rain and snow fall of yesterday .30 in.
12	12 18	Nimb.	2 S. W.	46 5 Cu. S.	25 44	0	10 Nimb.	29-20 73 29-59 82 29-57 79	12. .59 in.
13	13 31	6 Cu. S.	o	47 5 Cu. S.	2 S.	39 39	10 Nimb.	29-71 69 29-70 73 29-70 73	13. Begun raining 8 P. M.
14	14 32	10 Nimb.	o	48 5 Cu. S.	1 E.	35 34 ½	10 Nimb.	29-54 69 29-43 72 29-42 72	14. Rain fall up to 7 A. M. .56; later .19 in.
15	15 26	10 Nimb.	E.	36 4 Cu. S.	1 N.	27 29	o	29-37 65 29-39 73 29-51 73	15. Begun raining 11 A. M.
16	16 29	4 Cu.	I. N. W.	32 2 Cir. S.	2 Cu. S.	26 28 ½	o	29-56 68 29-60 70 29-52 72	16. Rain fall .52 in.
17	17 34	I. S.	46 9 Cu. S.	2 S.	45 42 ½	4 Cu.	1 S. E.	29-66 72 29-53 77 29-52 75	17. Rain fall 7 A. M. .16; in P. M. .36
18	18 31	2 Cir. Cu.	I. N. E.	45 5 Cir. S.	2 S.	33 35 ½	o	29-66 64 29-60 75 29-72 76	18. Rain fall 7 A. M. .05; at 9 P. M. .08
19	19 33	10 Nimb.	o	36 10 Nimb.	1 S. E.	40 37 ½	10 Nimb.	29-57 71 29-37 75 29-24 76	19. .08 in.
20	20 36	10 Nimb.	o	38 10 Cu.	2 N. E.	35 36	10 Nimb.	29-97 69 29-21 75 29-44 75	20. .02 in.
21	21 34	10 Nimb.	o	46 9 Cu.	1 N. E.	40 49	10 Nimb.	20-60 71 29-63 79 29-68 75	21. Rain began 11 A. M.
22	22 38	9 Cu. S.	o	53 3 Cu.	1 S.	42 43 ½	o	29-68 71 29-63 79 29-68 74	22. Rain began 11 A. M.
23	23 42	10 Nimb.	W.	45 10 Cir. S.	S. W.	45 44 ½	10 Nimb.	29-59 75 29-39 78 29-79 78	23. Slight rain 9 A. M.; River 11 ft. + .38 in.
24	24 46	10 Nimb.	o	54 9 Cu.	1 S. E.	40 45	o	29-18 74 29-16 29-32 80	24. .35 in.
25	25 39	9 Cu. S.	I. N. E.	53 1 Star.	o	49 47 ½	10 Nimb.	29-42 76 29-36 76 29-30 86	25. River 11 ft.
26	26 42	9 Cu. S.	o	53 10 Nimb.	1 S.	48 49 ½	10 Ch. S.	29-68 76 29-94 80 28-95 80	26. Total rain fall .49 in.
27	27 42	9 Cu. S.	2 W.	54 10 Nimb.	2 W.	42 43 ½	10 Nimb.	29-04 77 29-13 76 29-24 80	27. Average depth of snow .65 in.
28	28 36	o	I. W.	56 5 S.	1 E.	48 49 ½	10 Sir.	29-20 74 29-35 80 29-00 80	28. Average temperature 33° ½
29	29 19	2 Cir. Cu.	6 N.	55 0	1 N.	32 39 ½	8 Cu. N.	29-00 78 29-03 78 29-24 76	29. 68 29-37 66 29-37 72
30	30 25	4 N. W.	30 0	55 0	1 N.	35 24 ½	5 N. N.	29-37 63 29-40 77 29-30	31. 63 29-40 77 29-30

Meteorological Observations taken at Wilkes-Barre, Pa., for April, 1884, by E. L. Dana.

(Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 10' 4.6''$)

THERMOMETER.

Day.	BAROMETER.			REMARKS.							
	Wind.	Clouds.	Temp.	Wind.	Clouds.	Temp.					
	7 A.M.	9 A.M.	1 P.M.	7 A.M.	9 A.M.	1 P.M.					
1	8 Cir. S. 33 to Nimb. 32 to Cu. S.	E. N. W. 3 N. W.	48 Str. 36 to Nimb. 36 to Cu. S.	S. W. W. 3 N. W.	39 40 ¹ / ₂ 33 33 ¹ / ₂ 34 34 ¹ / ₂	10 Cu. S. 10 Cu. S. 10 Cu. S.	10 Cu. S. 10 Cu. S. 3 N. W.	29 30 28 30 28 30	74 29 63 79 28 63 75 28 63	88 29 14 80 29 00 79 29 00	82 80 80
2	35 o	2 N. W.	34 to Cu. S.	Cu. S.	3 N. W.	39 40 ¹ / ₂	9 Cu. Cu. S.	3 N. W.	29 02 29 02	73 29 00 77 29 12	78 4
3	34 to Cu. S.	2 N. W.	37 9 Cu. S.	Cu. S.	3 N. W.	32 33 ¹ / ₂	10 Cu. S.	2 N.	79 14	76 29 14	72
4	30 to Cu. S.	2 N. W.	35 10 Cu. S.	Cu. S.	2 N. W.	32 32 ¹ / ₂	10 Cu. S.	2 N.	29 00	73 29 14	72
5	33 9 Cu. S.	2 N. W.	43 4 Cu. S.	Cu. S.	2 N. W.	38 35	10 Cu. S.	2 N.	29 17	63 29 25	80
6	28 o	2 N. E.	53 Cir. S.	Cir. S.	2 S. W.	49 49 ¹ / ₂	10 N. Str.	1 S. W.	29 25	76 29 18	78 29 24
7	37 10 Nimb.	2 N. E.	35 10 Nimb.	Nimb.	2 N. E.	33 34 ¹ / ₂	10 N. Str.	1 S. W.	29 12	83 28 94	86 28 94
8	37 8 Cu. S.	2 N. W.	48 9 Cu. S.	Cu. S.	2 N. E.	39 49 ¹ / ₂	10 Nimb.	1 E.	29 02	74 29 04	74 29 18
9	39 9 Cu. S.	1 N. W.	44 10 Cu. S.	Cu. S.	1 N. W.	39 40 ¹ / ₂	10 Nimb.	1 E.	29 28	79 29 34	79 29 48
10	31 4 Cir. S.	o	50 4 Cu. S.	Cu. S.	1 N. W.	45 43 ¹ / ₂	9 N. Str.	o	29 53	70 29 46	82 29 41
11	35 4 Cir. S.	o	56 4 Cu. S.	Cu. S.	2 S. W.	43 44 ¹ / ₂	o	29 44	62 29 42	82 29 45	
12	44 to Cir. S.	o	63 9 Cu. S.	Cu. S.	2 S. E.	51 49 ¹ / ₂	to Nimb.	1 N. E.	29 27	80 29 08	88 29 00
13	44 to Nimb.	o	66 9 Cir. Cu.	Cir. Cu.	2 S. W.	50 53 ¹ / ₂	10 Nimb.	2 S. E.	29 00	84 29 02	82 29 16
14	44 8 Cu. S.	2 W.	44 10 Cu. S.	Cu. S.	2 N. W.	41 44 ¹ / ₂	10 Nimb.	2 S. E.	29 26	79 29 32	86 29 40
15	44 8 Cu. S.	2 N.	47 10 Cu. S.	Cu. S.	2 N. W.	43 43 ¹ / ₂	8 Cu. S.	2 N.	29 42	63 29 40	84 29 45
16	44 8 Cu. S.	2 N.	53 8 Cu. S.	Cu. S.	1 E.	49 48 ¹ / ₂	8 Cu. S.	2 N.	29 38	75 29 35	85 29 35
17	44 8 Cu. S.	2 N.	56 8 Cu. S.	Cu. S.	2 E.	47 49 ¹ / ₂	10 Cir. S.	2 N. E.	29 40	85 29 35	81 29 49
18	44 10 Str.	2 N.	45 3 Cir.	Cir.	3 N.	36 38 ¹ / ₂	2 Str.	2 N.	29 57	79 29 54	79 29 55
19	44 10 Cu. S.	1 E.	57 o	o	1 N. E.	48 49 ¹ / ₂	o	2 N.	29 55	72 29 48	78 29 47
20	47 8 Cu. S.	1 E.	72 o	o	1 N. E.	51 52 ¹ / ₂	o	1 N. E.	29 45	73 29 34	80 29 39
21	38 to Cu. S.	3 N.	59 o	o	1 N. E.	51 52 ¹ / ₂	10 Str.	1 N. E.	29 32	82 29 07	84 29 25
22	34 3 Cir.	3 N.	57 o	o	1 N. E.	51 52 ¹ / ₂	10 Str.	1 N. E.	29 20	82 29 07	82 29 03
23	32 o	1 N. E.	61 Ch. S.	Ch. S.	3 N. W.	51 52 ¹ / ₂	5 Cu. S.	1 N. E.	29 17	86 29 17	85 29 30
24	45 3 Cir.	1 N. E.	58 9 Cu. S.	Cu. S.	3 N. W.	49 50 ¹ / ₂	5 Cu. S.	1 N. E.	29 15	94 29 40	83 29 44
25	45 3 Cir. S.	1 N. E.	68 3 Cu.	Cu.	3 S. W.	57 58 ¹ / ₂	o	3 N.	29 43	63 29 34	87 29 44
26	42 o	1 S. W.	72 o	o	3 S. W.	59 60 ¹ / ₂	o	1 N. E.	29 45	74 29 48	78 29 52
27	54 o	1 S. W.	73 o	o	3 S. W.	58 60 ¹ / ₂	o	1 N. E.	29 52	95 29 46	84 29 43
28	44 o	3 N. E.	45 2 Cu.	Cu.	3 N.	38 41 ¹ / ₂	o	1 N. E.	29 52	95 29 46	84 29 43
29	44 o	3 E.	63 o	o	2 N.	56 54	o	1 N. E.	29 52	95 29 46	84 29 43

2. R. fall last night, '46; thunder shower last night, rain fall to day, '27. .73 in.

3. R. F. last night, '20; river 12 M. 5 ft. + River 4 ft. +

Rain during P. M.; also, at 9:15 P. M., R. F. Yest. 11; 3 P. M. snowing; snow and rain fall '77.

88 in. Rain and snow fall of last eve, '52. .51 in.

Rain at 7 A. M. Rain last night and yesterday, '19. .19 in.

River 5 ft. + Total rain fall for April, '883

Total rain fall for April, '883

Average temperature 44 $\frac{1}{2}$ °

Meteorological Observations taken at Wilkes-Barre, Pa., for May, 1884, by E. L. Dana.

(Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 10' 4.6''$)

Day.	THERMOMETER.			BAROMETER.			REMARKS.		
	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	Atmos.	Atm. Th.	Atm. Th.
1	W.	77	Cu.	2 W.	66	Cu.	2 S. W.	29-41	90-30
2	63 5 Cir. S.	81	o	52 W.	65	52	9 Cu.	29-35	85-29
3	44 o Smoky. 1 W.	65	2 Cir.	3 N. W.	50	52	1 N.	29-35	88-29
4	45 o Smoky. 1 S.	55	10 Nimb.	1 N. W.	59	52	1 Nimb.	29-40	89-35
5	46 10 Nimb. 1 N.	66	9 Cu. S.	1 W.	60	68	7 Cir.	29-40	87-35
6	47 10 Nimb. 1 N.	57	10 Cu. R.	2 E.	52	54	2 N.	29-39	82-24
7	49 10 Cu. 2 E.	50	10 Cu. S.	2 E.	45	47	10 Cu. S.	2 N.	29-30
8	42 10 Cu. S. 2 N.	58	9 Cu. S.	1 E.	52	52	10 Cu. S.	2 N.	29-38
9	53 9 Cu. S.	63	8 Cu. S.	2 S. W.	49	53	1/2	29-38	80-34
10	50 9 Cu. 3 Cu.	56	8 Cu. S.	2 N. W.	47	50	1 S. E.	29-38	80-29
11	48 10 Cu. 3 Cu.	63	5 Cu.	3 N. W.	46	59	1/2	29-38	82-32
12	48 o	64	3 Cu.	3 N. W.	53	54	1/2	29-38	84-29
13	48 o	73	8 Cu. S.	3 S. W.	61	63	1/2	29-38	80-30
14	51 3 Cu. 3 W.	63	7 Cir.	3 N. W.	52	53	1/2	29-38	80-30
15	55 2 Cir. S. 1 S.	70	4 Cir.	3 S. W.	53	57	1/2	29-38	80-30
16	53 4 Cir. 4 W.	60	4 Cir.	3 N. W.	49	52	1/2	29-38	80-30
17	50 8 Cir. Cu. 2 S. W.	63	7 Cir. S.	3 N. W.	50	52	1/2	29-38	80-30
18	47 o	73	1 N. E.	2 S. W.	60	62	1/2	29-38	80-30
19	60 3 Cir. 2 S. E.	78	8 Cu. S.	4 S. W.	66	67	1/2	29-38	80-30
20	62 10 Cu. S. 2 S. E.	71	8 Cu. S.	3 S. W.	60	63	1/2	29-38	80-30
21	56 4 Cir. 1 N. E.	78	o	1 N. W.	65	66	2 Cu. S.	29-38	80-30
22	59 2 Cir. S. 8 Cir. S.	87	2 Cir.	2 W.	74	73	10 Nimb.	29-38	80-30
23	71 1 N. W.	90	3 Cir. Cu.	3 S. S.	71	73	1/2	29-38	80-30
24	71 8 Cir. S. 1 S.	85	3 Cir. Cu.	3 S. W.	69	73	1/2	29-38	80-30
25	71 3 Cu. 1 E.	76	8 Cu. S.	1 N. E.	65	68	1/2	29-38	80-30
26	65 7 Cir. S. 1 N. E.	71	9 Cu. S.	1 E.	62	65	o	29-38	80-30
27	63 7 Cir. S. 1 N. N.	75	8 Cir. Cu.	1 S. S.	59	64	10 Nimb.	29-38	80-30
28	49 10 Str. 2 N.	55	5 Cir. Cu.	3 N. W.	42	47	o	29-38	80-30
29	43 o	2 N.	59	4 Cir. S.	44	45	1/2	29-38	80-30
30	47 2 Cu.	57	1 S. W.	3 W.	47	49	1/2	29-38	80-30
31	48 o	71	1 W.	1 W.	65	62	1/2	29-38	80-30

Total rain fall
Total rain fall for May, 1883
Average temperature $58^{\circ} 50'$

4.27 in.
5.38 in.
5.38 in.

Meteorological Observations taken at Wilkes-Barre, Pa., for June, 1884, by E. L. Dana.
 (Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 40' 4.6''$)

Day.	THERMOMETER.			BAROMETER.			REMARKS.		
	A. M.	P. M.	N.	A. M.	P. M.	N.	A. M.	P. M.	N.
1	Cir. S.	W.	6	Cir. Cu.	2 W.	2 S. W.	29-67	29-61	29-63
2	Cir. S.	W.	81	Cir. Cu.	1 S.	9 Cu. S.	29-60	29-52	29-49
3	57	o	85	Cir. Cu.	2 W.	1 S. W.	29-58	29-40	29-36
4	62	o	81	Cir. Cu.	o	2 Cir. S.	29-47	29-40	29-30
5	64	o	81	Cir. Cu.	2 S. W.	o	29-47	29-40	29-30
6	65	o	87	Cir. Cu.	2 S. W.	71 73 74	o	29-47	29-40
7	68	o	87	Cir. Cu.	2 S. W.	71 73 74	o	29-47	29-40
8	70	o	87	Cir. Cu.	2 S. W.	67 73 74	o	29-47	29-40
9	70	o	87	Cir. Cu.	1 S. W.	2 Cir. Cu.	29-44	29-39	29-30
10	68	5 Cir. S.	85	Cir. Cu.	2 N. E.	64 68 75	2 Cir. Cu.	29-43	29-39
11	68	10	75	Cir. S.	2 W. E.	64 68 75	2 Cir. Cu.	29-43	29-39
12	66	10	75	Cir. S.	2 W.	64 68 75	2 Cir. Cu.	29-43	29-39
13	68	10	75	Cir. S.	2 E.	64 68 75	2 Cir. Cu.	29-43	29-39
14	56	7 Cir. S.	71	Cir. S.	2 S. N.	60 65	9 Cir. S.	29-43	29-39
15	53	7	71	Cir. S.	2 S. N.	58 63 71	o	29-43	29-39
16	51	o	74	Cir. S.	2 S. N. W.	58 63 71	o	29-43	29-39
17	51	o	81	Cir. S.	2 W.	59 69	o	29-43	29-39
18	62	2 Cir. S.	89	Cir. S.	2 W.	69 73 74	o	29-43	29-39
19	65	r N. W.	90	5 Cir. S.	3 W.	74 75 74	9 Cu. S.	29-43	29-39
20	70	o	86	1 Cir. S.	1 E.	75 76 74	o	29-43	29-39
21	70	o	86	1 Cir. S.	1 N.	74 76 74	o	29-43	29-39
22	70	o	89	1 Cir. S.	2 N.	77 76	2 Cu. S.	29-43	29-39
23	69	o	85	1 Cir. S.	2 S.	75 76	1 S. W.	29-43	29-39
24	81	to Cir. S.	89	3 Cir. S.	3 W.	73 79	10 Cir. S.	29-38	29-34
25	76	9 Cu. S.	93	3 Cir. S.	3 W.	63 71 74	10 Nb. R. 1 N.	29-23	29-26
26	57	o	83	9 Cu. S.	2 E.	63 67 72	o	29-44	29-52
27	57	o	82	3 Cir. S.	2 N. E.	65 65 74	o	29-47	29-57
28	59	o	77	2 N. E.	2 N. E.	66 67	o	29-47	29-66
29	60	o	83	1 E.	1 E.	68 69 74	o	29-64	29-58
30	61	2 Cu. S.	82	2 Cir.	2 W.	75 73 74	5 Cir. S. 2 S. W.	29-59	29-44

3. Rain fall last night
 4. Shower this p. m. at 5 o'clock
 5. Shower of last night
 6. Rain fall last night
 7. Rain fall this p. m.
 8.

. or in.

. 29 in.

. 14 in.

. 68 in.

. 1.23 in.

. 1.00 in.

. 3.24 in.

. 8.13 in.

. 5.00 in.

Total rain fall for June, 1883
 Total rain fall for June, 1882

Average temperature p_2°

Meteorological Observations taken at Wilkes-Barre, Pa., for July, 1884, by E. L. Dana.
 (Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 10' 4.6''$)

Day.	THERMOMETER.				BAROMETER.				REMARKS.			
	7 A.M.	2 P.M.	9 P.M.	Avg. Temp.	7 A.M.	2 P.M.	9 P.M.	Atm. Temp.	7 A.M.	2 P.M.	9 P.M.	Atm. Temp.
1	80	75 Cir. Cu.	75 W.	84 Cu. S.	3 W.	74 1/2 Nimb.	10 Cu.	2 W.	20-35 81	29-23	80-23	81
2	69	75 Cir. Cu.	72 W.	86 4 Cu.	3 W.	72 3/4 Nimb.	9 Cu.	1 S. W.	20-38 79	29-23	85-28	83
3	64	72 Cir.	72 E.	81	72 1/4 Nimb.	8 Cu.	1 S.	1 S.	29-38 79	29-34	84-34	84
4	67	70	71 N.	83	9 Cu.	3 S.	10 Nimb.	0	29-31 79	29-30	83-24	82
5	74	70	70 Cu. S.	84	4 Cir. Cu.	3 S. W.	68 73 1/2	8 Cu. S.	29-22 82	20-15	84-29	80
6	66	70	70 Cu.	76	3 Cir. Cu.	3 W.	70 72 1/2	5 Cir. S.	20-23 78	20-17	80-26	78
7	62	69	71 S. W.	65 10	6 Cu. S.	2 N.	50 63 1/2	10 Cir. S.	29-30 79	29-30	86-37	80
8	59	60	59 Nimb.	62	9 Cu. S.	2 N.	68 69 1/2	10 Cir. S.	29-30 74	29-30	84-30	74
9	58	60	8 Cu. S.	69	1 Cu.	2 N.	62 69 1/2	2 Cir.	29-24 74	29-20	77-29	76
10	62	66	6 Cir.	79	1 Cu.	2 N.	69 70 1/2	0	29-20 76	29-20	82-29	25
11	63	62	2 Cu.	84	7 Cir. S.	2 S. W.	70 72 1/2	0	29-20 76	29-25	81	16.
12	66	60	1 S. W.	84	7 Cir. S.	2 S. W.	68 69 1/2	0	29-20 74	29-25	82	13.
13	67	70	70 Cir. S.	80	4 Cir. Cu.	3 W.	64 68 8	Cu. S.	29-20 76	29-25	84	12.
14	59	71	72 S. W.	68	4 Cir. Cu.	3 W.	65 69 1/2	1 W.	29-20 78	29-03	82-29	10
15	57	62	2 Cir. S.	74	9 Cu. S.	2 W.	60 65 1/2	1 Str.	29-20 74	29-20	77-29	22
16	59	60	8 Str.	73	8 Cu.	2 N.	65 65 1/2	2 Str.	29-26 72	29-13	73-20	17
17	60	64	4 Cu. S.	70	8 Cu.	2 N.	62 65 1/2	1 Str.	29-18 72	29-18	75-20	17
18	61	62	7 Cir. S.	70	4 Cir. Cu.	2 W.	68 69 1/2	1 Cir. S.	29-26 73	29-30	73-20	18
19	65	67	7 Cir. S.	69	10 Cir. Cu.	2 S. W.	68 70 1/2	0	29-37 74	30-73	82-29	25
20	63	60	1 S. W.	73	8 Cu.	3 W.	67 69 1/2	1 Str.	29-20 76	29-19	81-29	23
21	58	60	2 S. W.	73	8 Cu.	2 S. W.	63 65 1/2	1 Str.	29-28 76	29-20	76	27
22	62	62	3 Cir. S.	71	1 W.	81 2 Cu.	4 S. W.	8 Cu.	29-33 72	29-34	78-20	35
23	61	61	3 Cir. S.	87	4 Cu.	4 W.	68 69 1/2	0	29-39 78	29-32	82-29	35
24	72	70	10 Nimb.	82	1 W.	70 72 Cir. Cu.	1 N.	7 Cu. S.	29-34 78	29-22	84-29	82
25	70	70	10 Nimb.	79	10 Cu. S.	1 N.	73 73 1/2	2 Str.	29-39 82	29-27	86-29	84
26	65	65	5 Cir. S.	80	8 Cu.	2 W.	71 75 1/2	1 Str.	29-34 77	29-30	82-29	30
27	60	60	10 Nimb.	63	10 Nimb.	1 E.	61 65 1/2	10 Cu. S.	29-37 78	29-20	82-29	30
28	63	63	10 Cu. S.	71	6 Cir. Cu.	2 W.	68 69 1/2	10 Cu. S.	29-39 74	29-33	79-20	30
29	63	60	10 Nimb.	64	2 Cir. Cu.	2 W.	63 65 1/2	0	29-37 75	29-14	82-29	30
30	64	63	3 Cir. Cu.	78	1 W.	69 70 Cir. Cu.	1 W.	7 E.	29-25 73	29-25	82-29	25
31	68	68	10 Cu. S.	78	3 S. W.	78 10 Nimb.	1 S.	0	29-17 76	29-06	78-29	17

Meteorological Observations taken at Wilkes-Barre, Pa., for August, 1884, by E. L. Dana.
 (Latitude $41^{\circ} 14' 40.4''$ Longitude West $70^{\circ} 46.6'$)

Day.	THERMOMETER.				BAROMETER.				REMARKS.
	Clouds.	Wind.	Wind.	Clouds.	At. P.	At. T.	T. H.	At. P.	
1	W.	79	5 Cir.	1 W.	69	69 ³⁴	80	29.33	4. R. from 11:15 to 11:25 A. M., and 3:10 to 3:50 P. M.
2	o	1 W.	79	5 Cir.	68 ¹⁴	o	80	29.47	Rain last night.
3	59 o	1 W.	83	1 Cir.	71 ²	o	80	29.25	5. Rain at 9 P. M.
4	63 o	3 Cu.	82	1 Cir.	72 ⁸⁰	2 Cir. Cu.	1 W.	29.30	6. Raining at 9 P. M.
5	75 o	2 Cir.	84	4 Cir. Cu.	72 ⁷⁴	2 Cir.	1 W.	29.41	7. At a few minutes past 2 o'clock a distinct shock of an earthquake.
6	70 o	2 Cu. S.	78	3 Cir. Cu.	67 ⁶⁹	6 Cir.	o	29.40	8. The movement, judging from the inclination given to a door and window near which I was seated, was from west south west to east north east, and lasted but three or four seconds.
7	63 o	2 Cu. S.	79	3 Cir. Cu.	73 W.	7 Cir. Cu.	o	29.46	9. Rain last night and this A. M. to 12 M.
8	61 o	9 Cu. S.	78	4 Cir. Cu.	70 ⁶⁷	7 Cir. Cu.	o	29.46	10. Rain fall last night.
9	59 o	7 Cu.	74	4 Cir. Cu.	65 ⁶⁷	7 Cir. Cu.	o	29.46	11. Showers at 1:15 to 3 P. M.; rain fall.
10	60 o	3 Cu. S.	78	10 Str.	66 ⁶⁷	10 Nimb.	o	29.64	12. Rain fall last night.
11	62 o	o Nimb.	65	5 Cir. S.	71 N.	10 Str.	o	29.52	13. Rain fall this A. M. to 3:17 P. M. total
12	61 o	Fog.	74	5 Cir. Cu.	69 ⁶⁸	10 Str.	o	29.44	14. Begun raining 1 P. M.; total
13	60 o	Fog.	79	1 N. E.	69 ⁶⁹	2 S. W.	o	29.70	15. Begun raining 1 P. M.; total
14	60 o	Fog.	79	3 Cir. Cu.	71 N.	1 Cir. S.	1 N. W.	29.75	16. Total rain fall for August, 1883
15	60 o	Fog.	80	1 N. W.	68 ⁶⁶	o	70	29.70	17. Total rain fall for August, 1883
16	61 o	Fog.	82	2 Cir.	71 N.	70 ⁷¹	1 W.	29.72	18. Average temperature $71\frac{1}{4}$ °
17	60 o	N.W.	87	2 Cir.	71 N.	70 ⁷¹	o	29.72	19. Rain fall last night.
18	60 o	N.W.	88	1 W.	75 ⁷⁶	o	70	29.74	20. Begun raining 1 P. M.; total
19	66 o	Cir.	92	3 Cir. S.	71 ⁷⁵	o	70	29.67	21. Total rain fall for August, 1883
20	65 o	1 Cir.	90	2 Cir.	71 ⁷⁵	1 Cir.	o	29.68	22. Total rain fall for August, 1883
21	74 o	4 Cir. S.	91	4 Cir. Cu.	76 ⁷⁸	10 Cir. S.	o	29.66	23. Total rain fall for August, 1883
22	77 o	9 Str.	74	10 Cir. Cu.	74 ⁷⁸	10 Cir. S.	o	29.58	24. Total rain fall for August, 1883
23	67 o	Fog.	80	2 Cir. Cu.	72 ⁷³	o	o	29.54	25. Total rain fall for August, 1883
24	66 o	2 N. W.	74	10 Cir. Cu.	78 ⁷⁹	o	o	29.50	26. Total rain fall for August, 1883
25	47 o	1 E.	88	3 Cir. S.	75 ⁷⁶	o	o	29.63	27. Total rain fall for August, 1883
26	62 o	Str.	92	3 Cir. Cu.	73 S.	10 Str.	o	29.80	28. Total rain fall for August, 1883
27	57 o	2 S.	78	3 Cir. Cu.	72 S.	W.	o	29.59	29. Total rain fall for August, 1883
28	55 o	Fog.	75	1 S. W.	67 ⁶⁸	12	o	29.71	30. Total rain fall for August, 1883
29	66 o	Nimb.	79	5 Cir.	61 ⁶³	10 Nimb.	o	29.59	31. Total rain fall for August, 1883
30	68 o	Fog.	81	9 Cir.	73 S.	3 Cu.	o	29.33	32. Total rain fall for August, 1883
31	64 o	3 Cir. Cu.	72	5 Cir. S.	66 ⁶⁷	3 Cir. S.	o	29.49	33. Total rain fall for August, 1883
			72	5 Cir. S.	60 ⁶¹	2 N. N.	o	29.38	34. Total rain fall for August, 1883

Meteorological Observations taken at Wilkes-Barre, Pa., for September, 1884, by E. L. Dana.
 Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 46' 4.6''$

Day.	THERMOMETER.				BAROMETER.				REMARKS.				
	7 A. M.	2 P. M.	9 P. M.	Average Temp.	7 A. M.	2 P. M.	9 P. M.	Atmos. Th.	7 A. M.	2 P. M.	9 P. M.	Atmos. Th.	
1	52	0	65	62.4	71	4 Cir.	N. W.	68.68	76	29.54	57	71	Thunder shower 3 P. M.; another 6 P. M.; rain fall.
2	56	0	81	72	71	2 Cir.	S. W.	74.73	72	62.77	20.62	79
3	61	0	86	73	71	1 S. W.	76.82	74	66.88	20.64	84	
4	Fog.	3 W.	88	75	71	0 Cir.	2 W.	76.84	74	67.29	20.67	83
5	66	14 Cir.	1 S. W.	91	3 Cir.	Cu. 2 W.	75.76	71	70.87	20.70	84	Slight frost this A. M.	
6	63	Fog.	0	91	3 Cir.	Cu. 2 W.	75.77	71	71.87	20.71	84	White frost this A. M.	
7	66	2 Cir.	0	94	5 Cir.	Cu. 1 W.	77.78	72	71.87	20.71	84	Rain fall last night 03; thunder storm.	
8	66	0	91	91	3 Cir.	Cu. 3 N. E.	78.78	72	71.87	20.71	84	Rain fall last night 03; thunder storm.	
9	67	0	91	91	5 Cir.	Cu. 1 N. E.	79.77	72	71.87	20.71	84	Rain fall last night 03; thunder storm.	
10	67	Fog.	0	88	2 Cir.	2 W.	79.78	72	71.87	20.71	84	Rain fall last night 03; thunder storm.	
11	69	3 Cir.	Cu. 1 E.	92	2 Cir.	2 W.	71.75	10	Cu.	1 N.	86	Began raining at 10 A. M.	
12	60	5 Cir.	S.	60	0	3 N. E.	60.62	0	1 W.	29.58	80	Total rain fall for September, 1883.	
13	59	0	63	5 Cir.	0	3 N. W.	52.54	0	1 N.	29.79	75	1.66 in.	
14	52	0	63	5 Cir.	0	3 N. W.	53.52	0	1 N.	29.84	74	2.93 in.	
15	43	0	72	0	2 W.	61.59	4	Str.	0	29.84	73	Average temperature 67°	
16	58	1 Cir.	1 W.	78	4 Cir.	S. 2 S. W.	62.67	5	Str.	0	29.85	73	29.92 in.
17	58	3 Cir.	1 W.	77	9 Cir.	S. 2 S. W.	64.65	0	5 Str.	0	29.85	73	29.92 in.
18	60	1 S. W.	63	9 Cir.	1 E.	58.52	0	0	0	29.86	77	29.92 in.	
19	49	Fog.	0	68	2 Cir.	1 E.	55.56	0	1 N.	29.40	74	29.92 in.	
20	53	1 Cir.	1 W.	68	6 Cir.	2 Cir.	54.57	0	0	29.78	71	29.92 in.	
21	39	0	72	0	3 W.	54.57	0	0	0	29.66	72	29.92 in.	
22	46	5 Cir.	1 N. W.	74	7 Cir.	Cu. 2 W.	53.52	0	1 W.	29.81	76	29.92 in.	
23	55	7 Cir.	1 W.	72	7 Cir.	S. 2 W.	67.63	0	1 N. E.	29.60	73	29.92 in.	
24	67	5 Cir.	S.	83	7 Cir.	S. 3 S. W.	68.65	0	6 Cir. S.	29.57	76	29.92 in.	
25	69	4 Cir.	S.	66	9 Cir.	S. 2 N. W.	71.63	0	5 Cu. S.	29.68	78	29.92 in.	
26	53	4 Cir.	S.	72	0	1 S. E.	62.63	0	0	29.66	82	29.92 in.	
27	57	4 Cir.	S.	69	8 Cir.	S. 2 S. W.	67.65	0	2 S. S.	29.91	70	29.92 in.	
28	64	4 Cir. Cu.	0	81	8 Cir. S.	2 S. W.	71.67	0	3 S. W.	29.80	70	29.92 in.	
29	63	3 Cir.	1 W.	76	4 Cir. Cu.	2 W.	65.67	0	10 Nimb.	29.50	75	29.92 in.	
30	62	No Nimb.	0	67	10 Nimb.	1 S. W.	66.65	0	0	29.59	80	29.92 in.	

Meteorological Observations taken at Wilkes-Barre, Pa., for October, 1884, by E. L. Dana.
 (Latitude $41^{\circ} 14' 40''$ Longitude West, $10^{\circ} 46'$)

Day.	THERMOMETER.				BAROMETER.				REMARKS.				
	Clouds.	Wind.	Clouds.	Wind.	Clouds.	Wind.	Clouds.	Wind.	Atmos.	Atm.	Atm.	Atm.	
1	3 Cir.	S. W.	3 Cir. Cu.	W.	69	71	6 Cu. S.	N. E.	29.72	77	29.72	82	
2	53 to Nimb.	o	54 to Nimb.	I N. E.	53	54	to Str. R.	I N.	29.88	74	29.80	.56 in.	
3	53 to Nimb.	2 W.	57 to Star.	I S.	57	56	I S. W.	I S.	29.80	78	29.70	.56 in.	
4	61 to Nimb.	2 S. W.	72 o	72 o	60	64	4 Cir.	4 Cir.	29.60	79	29.45	.66 in.	
5	62 to Cir. Cu.	2 N. W.	62 o	56	63	64	o	o	29.54	72	29.52	.67 in.	
6	55 to Nimb.	3 Cir.	73 o	73 o	68	65	3 Cir.	o	29.45	72	29.39	.67 in.	
7	58 5 Cir.	I S. W.	75 5 Cir.	I W.	57	66	9 Cir. S.	3 N.	29.50	75	29.50	.67 in.	
8	51 4 Cir. Fg.	I N. W.	71 4 Cir.	I W.	59	66	9 Cir. S.	3 N.	29.44	68	29.30	.67 in.	
9	42 4 Cir.	I N. E.	51 o	51 o	43	44	3 N.	o	29.64	73	29.65	.67 in.	
10	37 o Fog.	N. S.	61 o	61 o	3 N. W.	59	49	12	o	29.80	80	29.77	.67 in.
11	49 o Fog.	S. W.	69 o	69 o	6 Cir. S.	2 S. W.	57	55	12	20. River very low for a month past.	20. River very low for a month past.	20. River very low for a month past.	
12	55 to Cir. S.	I S. W.	77 9 Cir. S.	I W.	64	63	2 W.	2 S.	29.73	73	29.59	.67 in.	
13	63 8 Cir.	I S. W.	60 o	60 o	2 N. E.	54	66	o	29.60	74	29.54	.67 in.	
14	46 1 Cir.	I N.	50 1 Cir.	2 N.	44	46	o	1 N.	29.59	73	29.50	.67 in.	
15	36 2 Cir.	I N.	45 o	45 o	44	42	4	3 W.	29.58	76	29.84	.67 in.	
16	47 8 Cir.	2 S. W.	60 4 Cir.	3 S. W.	58	58	10 Cu. S.	3 W.	29.88	69	29.49	.67 in.	
17	56 o	2 S. W.	62 9 Cir. S.	2 N.	49	54	10 Cir. S.	1 N. E.	29.41	75	29.34	.67 in.	
18	47 o	3 S. W.	62 5 Cir.	3 N.	38	43	o	o	29.32	77	29.30	.67 in.	
19	35 o	3 S. W.	61 3 Cir.	I W.	55	51	2 Str.	2 W.	29.50	74	29.83	.67 in.	
20	44 o	o	52 5 Cir.	I W.	52	54	2 Str.	o	29.57	74	29.82	.67 in.	
21	42 o Fog.	I W.	75 o	75 o	61	59	10 Nimb.	1 S.	29.86	71	29.70	.67 in.	
22	62 1 Cir.	2 W.	67 10 Nimb.	2 W.	56	60	5 Nimb.	2 W.	29.45	76	29.45	.67 in.	
23	44 o	3 W.	63 8 Nimb.	2 N.	38	40	5 Nimb.	2 W.	29.58	76	29.74	.67 in.	
24	37 o	3 N. W.	49 8 Cir. Cu.	2 S. W.	42	42	12 Str.	o	29.62	70	29.75	.67 in.	
25	41 8 Cir. S.	I S. W.	47 2 Cir. Cu.	I W.	36	40	10 Str.	2 S.	30.68	70	29.74	.67 in.	
26	32 o	I N. E.	47 3 Cir. S.	I S. W.	45	44	12 Str.	I E.	29.87	73	29.78	.67 in.	
27	49 10 Nimb.	3 S. W.	48 3 Cir. S.	I S. W.	58	50	10 Nimb.	I Nimb.	29.60	78	29.55	.67 in.	
28	56 10 Nimb.	I S. W.	53 8 Nimb.	I W.	46	51	12 Str.	I S. W.	29.86	74	29.72	.67 in.	
29	35 1 Str.	I W.	54 10 Str.	I W.	48	46	12 Str.	I S. W.	29.62	70	29.76	.67 in.	
30	44 10 Nimb.	2 N. E.	54 10 Nimb.	I N.	48	45	10 Nimb.	I N. W.	29.53	80	29.45	.67 in.	
31	49 10 Nimb.	I N.	51 10 Nimb.	I N.	48	45	8 Cir.	I N. W.	29.53	80	29.45	.67 in.	

Total rain fall for October, 1883 . . . 3.43 in.

Average temperature $53\frac{1}{2}$ °

Meteorological Observations taken at Wilkes-Barre, Pa., for November, 1884, by E. L. Dana.
 (Latitude 41° 14' 40.4" Longitude West 10° 10' 4.6")

Day.	THERMOMETER.				BAROMETER.				REMARKS.			
	7 A. M.	2 P. M.	9 P. M.	At. Th.	7 A. M.	2 P. M.	9 P. M.	At. Th.	7 A. M.	2 P. M.	9 P. M.	At. Th.
1	47	8	Cir. Cu.	1 S. W.	57	o	8 Cir. S.	o	29.40	76	29.40	76
2	47	8	Cir. Cu.	1 N.	50	10 Str.	1 N.	34	76	29.48	76	29.40
3	32	9	Nimb.	1 N. E.	51	1 Cir.	1 W.	43	74	29.60	74	29.60
4	44	10	Nimb.	1 N. E.	56	5 Cir.	4 E.	43	74	29.65	74	29.65
5	35	12	Cir. Cu.	3 W.	49	5 Cir.	3 W.	39	74	29.70	74	29.70
6	35	12	Cir. Cu.	2 W.	36	3 Cir. S.	3 W.	31	74	29.70	74	29.70
7	31	12	S. W.	2 S. W.	50	3 Cir. S.	3 W.	46	74	29.70	74	29.70
8	43	5	Cu.	2 W.	43	o	2 N.	34	74	29.70	74	29.70
9	25	9	Cu.	2 W.	51	o	2 N.	37	74	29.75	75	29.75
10	32	0	W.	1 W.	37	o	3 W.	43	75	29.75	75	29.75
11	36	2	Cir.	9 Cu.	53	9 Cu.	1 E.	48	75	29.75	75	29.75
12	44	10	Str.	1 N.	49	2 Cu.	2 N.	43	75	29.75	75	29.75
13	29	8	Str.	1 W.	54	1 Cir.	2 W.	45	75	29.75	75	29.75
14	38	0	o	o	53	o	1 N. W.	36	75	29.75	75	29.75
15	30	0	o	o	53	o	1 N. W.	37	75	29.75	75	29.75
16	31	7	Str.	o	50	7 Cu.	1 W.	38	75	29.75	75	29.75
17	35	10	Str.	1 N. W.	55	8 Cu.	2 N.	31	75	29.75	75	29.75
18	27	3	Cir. Cu.	3 N. E.	53	8 Cir. S.	1 N. E.	34	75	29.75	75	29.75
19	36	6	Nimb.	2 N. E.	34	10 Nimb.	1 N. E.	34	75	29.75	75	29.75
20	34	10	Nimb.	1 N.	38	10 Cir. S.	2 W.	34	75	29.75	75	29.75
21	28	0	o	1 S. W.	49	o	4 S. W.	30	75	29.75	75	29.75
22	28	0	Fog.	1 W.	52	2 Cir.	2 S.	41	76	29.80	76	29.80
23	53	10	Str.	3 S. E.	64	10 Nimb.	4 S.	53	76	29.80	76	29.80
24	44	14	Cu.	4 W.	36	7 Cu.	4 W.	24	76	29.80	76	29.80
25	23	23	7	Str.	3 W.	29	10 Nimb.	2 S. W.	36	73	29.80	76
26	34	10	Nimb.	1 S. W.	41	12 Cu.	3 S. W.	26	73	29.80	76	29.80
27	22	1	Cir. S.	2 S.	34	10 Str.	1 W.	36	73	29.80	76	29.80
28	33	16	Str.	1 W.	52	15 Str.	1 S.	42	74	29.80	76	29.80
29	6	5	Cir. Cu.	3 N. W.	39	4 Cir. Cu.	2 W.	36	74	29.80	76	29.80
30	29	9	Cir. S.	1 W.	39	10 Cir. S.	1 W.	33	74	29.80	76	29.80

3. Lowest temperature last night 28°. Began rain-
 ing 10 P. M.

4. R. fall 1 last night and today till 1 P. M.
 35 in.

5. Rain fall last evening 2 P. M.
 .05 in.

7. Lowest temperature last evening 27°.

9. Minimum last night 23°.

11. Began snowing slightly at 8 P. M. from
 N.E.

13. Show at 8 A. M., melted .30 in, rain 11 and
 30 in.

15. Rain fall yesterday and last night
 20 in.

17. Rain at 6 P. M. and wind high,
 river 17+ 2.11 in.

19. Rain fall 2 P. M. till midnight, river 17+
 2.11 in.

21. Minimum temp. last night 17°.

23. Thanksgiving day, flurry of snow in A. M.

25. Thanksgiving day, flurry of snow in A. M.

27. Rain fall last night
 28. Rain training 5 P. M.

29. Rain fall last night
 30. Slight flurry of snow this evening
 31. Total rain fall for November, 1883
 3.28 in.

32. Total rain fall for November, 1883
 1.57 in.

Average temperature 37°.

The river at Wilkes-Barre during the low water period of this and the two past seasons has been from nine to seventeen inches below the low water mark on the first pier of the bridge. This lowering of the surface of the river in front of the city may be due in part to diminished rain fall or to the water passing more rapidly on account of the diminished forest area, but is probably mostly due to the channel through riffles below the island in order to aid navigation.

Meteorological Observations taken at Wilkes-Barre, Pa., for December, 1884, by E. L. Dana.
 (Latitude $41^{\circ} 14' 40''$ Longitude West $10^{\circ} 46'$)

Day.	THERMOMETER.				BAROMETER.				REMARKS.				
	Clouds.	Wind.	Temp.	Atmos.	Clouds.	Wind.	Temp.	Atmos.	Clouds.	Wind.	Temp.	Atmos.	
1	33 10 Cir.	E.	34 10 Cir. Cu.	W.	31 3/4	10 Nimb.	1 S. W.	29.66	8.1	29.67	75	1. Snowing at 8 A. M.	
2	31 0	N.	42 0	4 Cir. S.	2 S. W.	28 3/4	0	1 W.	29.67	74	29.66	75	2. Rain began 11 A. M.; at 4 P. M. rain fall .35 in.
3	24	1 W.	41 4 Cir. S.	2 S. W.	33 3/4	5 Cir.	1 S. W.	29.50	78	29.40	73	3. Rain fall last night with high wind .116 in.	
4	26	1 W.	48 0	2 S. W.	34 3/4	6 Cir.	1 S. W.	29.62	76	29.59	74	4. Rain fall last night with .40 in.	
5	30	0	51 0	10 Nimb.	2 E.	58 49/2	to Nimb.	0	29.67	75	29.41	72	5. Rain fall last night with yes- .16 in.
6	33	to Cir. S.	49 10 Nimb.	4 S. W.	49 53/2	to Str.	2 S. W.	29.57	79	29.00	79	6. Rain fall last night .40 in.	
7	35	8 Cir.	57 9	Cu.	42 44	5 Cu.	2 S. W.	29.21	77	30.49	78	7. Rain fall last night .15 in.	
8	45	3 Cir.	47 8	Cu.	36 39/4	4 Cu.	3 S. W.	29.46	78	29.38	72	8. Rain fall last night .15 in.	
9	40	4 Cir.	41 9	Cir. S.	3 S. W.	39 39/4	to Str.	1 S. W.	29.74	72	29.66	78	9. Snow fell 3 in.
10	34	10 Str.	44 10 Cir.	S.	2 W.	39 49/4	to Str.	1 N.	29.50	79	29.50	76	10. Minimum temperature last night -2°.
11	31	10 Nimb.	1 N.	2 N.	30 39/4	to Str.	1 N.	20.53	73	29.45	78	11. Minimum temperature last night -8°.	
12	30	10 Cir. S.	2 N.	10 Str.	31 3/4	10 Str.	1 S.	20.70	73	29.80	82	12. River closed with ice.	
13	32	10 Cir. S.	1 N.	32 10 Cir. S.	2 N.	30 39/4	to Nimb.	2 S.	29.90	75	29.80	85	13. Snow 2 1/2 in.; melted .14 in.
14	36	10 Str.	33 10 Str.	1 S.	39 28/4	0	3 W.	29.10	80	29.20	78	14. Rain fall yesterday; last night .77 in.	
15	37	8 Nimb.	46 8 Cu.	2 S. W.	28 28/2	0	1 S.	29.66	80	29.54	82	15. 6 P. M., 13°. .90 in.	
16	22	2 Cir.	32 0	S.	26 9 Nimb.	1 N.	20.40	75	29.38	80	16. Snow 2 1/2 in.		
17	30	10 Str.	1 S.	24 28/2	10 Str.	1 N.	20.60	70	29.60	72	17. Snow fall 2 1/2 in.; melted .28 in.		
18	18	2 Str.	17 10 Str.	2 N.	10 13/4	0	3 N.	29.85	78	29.78	76	18. At 4:48 P. M., the ice in river moved off, the water being about 5 ft. above low water mark. Ice 1 ft. thick. Water rose to 12 1/2 ft. Ice continued moving until 3 A. M., of the 26th, when a gorge was formed and ice stopped. Water at 7:45 A. M. on pier.	
19	0	2 N.	3 0	2 W.	-1 1/4	0	2 N.	30.06	75	30.00	72	19. Show last night 1 1/2 in.; melted .02 in.	
20	-5	0	6 0	10 Str.	12 6/4	10 Str.	2 S.	29.66	72	29.44	74	20. Ice on Br. pier 9 ft. thick. Water mark. Then later stopped again .02 in.	
21	22	10 Nimb.	34 10 Nimb.	1 W.	34 3/4	10 Nimb.	0	20.30	80	29.10	79	21. Ice moved .02 in.	
22	33	10 Str.	42 10 Nimb. S.	2 W.	40 38/3	0	3 N. W.	20.70	79	29.80	80	22. Total rain fall .372 in.	
23	18	2 Cir.	1 S. E.	28 8 Cir.	22 22/2	2 Cir.	1 S.	29.95	78	29.94	84	23. Total rain fall for December .1883 .215 in.	
24	15	10 Nimb.	1 N.	25 10 Str.	1 W.	27 23/2	10 Str.	1 S. W.	29.75	79	29.57	76	24. Av. temp. Dec. 1883, 32°
25	14	10 Cir. S.	17 10 Str.	2 N.	12 13/4	10 Str.	2 N.	29.90	73	29.95	72	25. Av. temp. Dec. 1883, 32°	
26	8	1 N.	19 0	2 N.	-1 1/4	0	1 N.	30.05	73	29.97	72	26. Show last night 1 1/2 in.; melted .02 in.	
27	12	10 Str.	29 10 Str.	1 W.	31 3/4	10 Str.	1 S.	30.10	68	30.00	74	27. Ice on Br. pier 9 ft. thick. Water mark. Then later stopped again .02 in.	
28	33	10 Nimb.	40 10 Str.	2 S.	35 3/4	10 Cir. S.	0	30.30	70	30.30	72	28. Total rain fall .1883 .215 in.	
29	33	to Cir. S.	44 1 Cir.	1 S.	37 33/4	Misty.	1 S.	29.95	78	29.94	84	29. Total rain fall for December .1883 .215 in.	
30	32	Fog.	37 Misty	1 S.	37 33/4	Misty.	1 E.	29.80	80	29.80	82	30. Total rain fall for January .1883 .215 in.	
31	35	Misty	50 4 Cir. S.	1 S.	54 48/8	8 Nimb.	2 S. W.	29.53	80	29.59	84	31. Total rain fall for February .1883 .215 in.	

Meteorological Observations taken at Wilkes-Barre, Pa., for January, 1885, by E. L. Dana.

Meteorological Observations taken at Wilkes-Barre, Pa., for February, 1885, by E. L. Dana.
 (Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 10' 4.6''$)

Day.	THERMOMETER.				BAROMETER.				REMARKS.			
	7 A. M.	9 A. M.	1 P. M.	9 P. M.	7 A. M.	9 A. M.	1 P. M.	9 P. M.	A. M., Th.	9 P. M.	1 P. M.	9 P. M.
1	16 no Nimb.	1 W.	36 8 Cu.	1 E. S. W.	14 22/4	o	2 E.	29.26	79.22	74	29.49	75
2	16 1 W.	1 N. Cu. S.	16 2 Cir. S.	1 S. N. W.	18 8	o	Ninh.	29.64	79.56	74	29.39	76
3	9 10 Cu. S.	1 N. S. W.	40 2 Nimb.	1 S. N.	21 18/4	o	6 Cir. S.	29.39	78.36	74	29.39	76
4	25 10 Cir. S.	1 S. W.	2 Cir.	1 S. N.	33 13/2	o	S. W.	29.15	82.8	98.94	28.90	92
5	30 10 Str.	2 N.	33 10 Cu. S.	1 S. E.	21 26/4	o	10 Nimb.	29.10	77.29	16.33	29.16	73
6	11 4 Cu. S.	2 N.	13 o	2 N.	5 8/4	o	2 N.	29.33	70.2	35.72	29.47	73
7	4 10 Cir. S.	1 N.	17 o	1 N.	21 15/4	o	10 Str.	29.60	72.9	29.46	70	12.
8	25 10 Cir. S.	1 S. W.	33 9 Cir. S.	1 W.	28 8/8	o	10 Str.	29.36	65.29	43.78	29.59	75
9	19 10 Str.	2 N.	33 10 Nimb.	1 N.	30 3/8	o	10 Nimb.	29.48	73.29	32.92	29.00	76
10	37 no Nimb.	3 W.	26 8 Cu. S.	3 W.	6 18/4	o	4 W.	28.84	78.82	90.32	29.00	76
11	17 o	3 W.	6 o	3 W.	2 1/4	o	1 Cir.	29.50	61.29	56.70	29.74	74
12	15 1 N. E.	23 10 Cir.	29 10 Cir.	3 S. W.	15 12	o	2 N.	29.74	68.29	56.74	29.57	74
13	9 Cir. S.	1 S.	28 5 Cu.	1 N. E.	14 14	o	10 Nimb.	29.68	73.29	66.76	29.58	79
14	7 o	1 S.	30 o	1 N. E.	21 19/4	o	1 N. E.	29.55	73.29	48.86	29.48	74
15	5 o	1 S.	34 10 Nimb.	2 S. E.	36 29	o	8 Str.	29.60	70.29	57.74	29.60	78
16	30 no Nimb.	3 N. E.	34 10 Nimb.	1 S. W.	5 5	o	3 W.	29.20	74.10	51.29	29.74	76
17	12 2 S. W.	12 o	1 S. E.	1 S.	14 15	o	5 Cir.	29.49	69.29	46.57	29.49	70
18	9 no Nimb.	1 S. E.	25 o	4 Cir. Cu.	2 N. W.	4 6/4	3 Cir.	29.40	69.29	44.86	29.54	75
19	19 2 Cir. S.	1 W.	19 4 Cir. Cu.	2 S. W.	2 2/4	o	1 S. W.	29.53	76.29	45.78	29.41	72
20	-7 3 Cir.	1 S.	12 5 Cir. Cu.	2 S. W.	17	o	1 W.	29.44	68.29	45.72	29.55	72
21	3 9 Str.	2 S.	17 o	1 N.	3 6/4	o	o	29.65	68.29	60.76	29.68	78
22	13 1 S. N.	13 o	13 o	1 N.	9 4/4	o	8 Cir.	29.70	63.29	64.68	29.74	70
23	13 8 Cu. S.	12 S.	24 o	2 N.	13 15/4	o	1 N.	29.85	66.29	88.72	29.89	70
24	17 o	1 N.	24 3 Cir.	o	15 1/4	9	Cir.	29.92	68.29	89.72	29.79	80
25	19 7 Cir.	1 E.	32 o	1 N. E.	18 13/4	o	1 N.	29.60	77.29	60.32	29.67	80
26	13 o	1 N.	24 6 Cir.	1 N. W.	23 16/4	5	Cir.	29.63	71.29	61.77	29.54	81
27	20 Cir.	1 N. W.	33 4 Cir.	1 S. W.	31 1/4	o	1 W.	29.49	78.29	42.86	29.59	80
28	30 Cir.	1 E.	39 o	1 S.	34 3/4	4	Cir.	29.60	80.29	66.83	29.59	78

I. Slight snow $\frac{1}{2}$ in.; melted.
 3. Snow last night 1 in.; melted.
 4. Rain and sleet 2 p. M.
 5. Rain fall last night
 6. Rain and snow squalls; Rain fall last night
 7. Minimum temperature last night -10°
 8. Slight snow last night 1 in.
 9. Snow melted
 10. Snowing at 9 P. M.
 11. About 1 in. of snow.
 12. Snowing at 8 in. deep; melted 1.00 in.
 13. Snowing at 1.00 in.
 14. Snowing at 2.07 in.
 15.
 16.
 17.
 18.
 19.
 20.
 21.
 22.
 23.
 24.
 25.
 26.
 27.

Total rain fall for February, 1884.
 Total rain fall for February, 1884.
 Average temperature 17°
 Depth of snow fall during month 19 in.

METEOROLOGICAL OBSERVATIONS.

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Meteorological Observations taken at Wilkes-Barre, Pa., for March, 1885, by E. L. Dana.
 (Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 10' 4.6''$)

Day.	THERMOMETER.				BAROMETER.				REMARKS.			
	7 A. M.	2 P. M.	9 P. M.	12 M.	7 A. M.	2 P. M.	9 P. M.	12 M.	7 A. M.	2 P. M.	9 P. M.	12 M.
1	36 Cir.	2 S.	38 ro Nimb.	10 Cu. S.	1 S. W.	33 5	5 Cir.	2 S.	29.20	78	29.10	79.10
2	29 8 Cu. S.	2 W.	34 8 Cu. S.	2 Cu. S.	2 N.	27 30	6 Cir.	1 N.	29.10	78	29.22	82
3	30 2 Cir. S.	1 N.	37 5 Cir.	2 S.	20 26 1/2	10 Cir. S.	0	29.40	71	29.34	78	74
4	39 8 Cu. S.	0	41 4 Cu. S.	1 N.	34 34 1/2	10 Cir. S.	1 S.	29.00	78	29.44	82	70
5	39 ro Cu. S.	1 N. E.	35 Cu. S.	2 N.	28 30 1/2	10 Sur.	1 N.	26.70	70	29.60	78	66
6	32 ro Cu. S.	1 N. E.	32 Cu. S.	2 N.	26 28 1/2	2 Cir.	2 S.	29.50	72	29.67	72	62
7	32 ro Nimb.	1 N.	39 ro Cir.	1 N.	27 28 1/2	10 Nimb.	2 S.	29.50	72	29.42	82	47
8	13 2 Cir. S.	2 N.	21 4 Cu.	2 Cu.	10 13 1/2	0	1 S. W.	29.58	73	29.54	72	47
9	14 2 Cir. S.	2 S. W.	34 5 Cir.	1 S. W.	30 24 1/2	10	2 N.	29.44	72	29.52	72	47
10	21 0	3 N. W.	23 0	2 N. W.	14 18 1/2	0	2 N.	29.85	74	29.76	78	70
11	9 0	2 N.	22 2 Cir.	2 Cir.	20 17 1/2	12	2 N.	29.53	72	29.63	78	70
12	0	1 N.	31 8 Str.	2 N.	13 19 1/2	5	2 N.	29.53	72	29.67	78	70
13	0	1 N.	24 8 Cir. S.	1 N.	19 15 1/2	10 Nimb.	1 S.	29.70	66	29.58	76	50
14	7 5 Cu. S.	1 N.	30 26 1/2	1 N. E.	29 26 1/2	10 Cir.	2 N. W.	29.55	78	29.50	76	40
15	37 ro Nimb.	2 N.	42 4 Cir. S.	2 W.	29 30	9 Str.	2 N. E.	29.10	74	29 10	76	40
16	17 0	33 7 Cir. C.	2 W.	19 22	7 Cir. C.	1 N.	1 W.	29.30	72	29.35	70	27
17	1 0	1 W.	15 3 Cir. C.	1 N.	6 7	0	1 N.	29.70	72	29.64	70	27
18	3 0	1 N.	23 4 Cir.	1 S. W.	13 11 1/2	0	0	29.53	72	29.49	75	27
19	9 20	1 N.	19 8 Cir. S.	2 N.	8 11	0	2 N.	29.20	70	29.16	78	20
20	9 4 Cir. S.	2 S. W.	10 10 1/2	8 Cir. C.	3 N. W.	6 7 1/2	0	29.20	73	29.30	73	27
21	2 0	12 S. W.	20 0	0	10 10 1/2	0	2 N.	29.60	67	29.60	73	27
22	2 2	4 Cir.	1 N.	16 2 Cir.	2 N.	11 10	2 Cir. S.	0	29.72	68	29.58	71
23	2 3	5 Cir. C.	2 N.	21 2 Cir.	2 N.	14 14 1/2	0	1 N.	29.62	68	29.64	71
24	6 5 Cir. S.	1 N.	33 8 Cir. S.	3 S.	30 24 1/2	6	Cir. C.	1 S. W.	29.83	66	29.65	72
25	23 0	1 N.	33 0	1 W.	21 24 1/2	4 Cir.	1 S. W.	29.70	76	29.71	78	74
26	23 0	1 N.	43 Cir. S.	2 S.	34 32 1/2	1	Cir.	1 N.	29.46	75	29.36	85
27	34 Cir. S.	1 S. W.	53 Cir.	2 W.	39 40 1/2	10 Nimb.	1 N. W.	29.46	75	29.36	85	35
28	33 ro Str.	2 N.	40 5 Cir.	2 N.	23 31 1/2	10 Nimb.	1 N. E.	29.48	75	29.50	74	35
29	24 2 Cir. S.	2 N.	32 0	1 N.	23 25 1/2	0	0	29.56	74	29.60	76	75
30	39 5 Cir. S.	1 N.	43 8 Cir. S.	2 S.	30 33 1/2	2 Nimb.	4 S. E.	29.87	76	29.74	80	75
31	36 6 Cir. S.	1 S. W.	54 8 Cir. S.	1 S.	47 46	10 Nimb.	2 S.	29.64	84	29.55	81	80

Meteorological Observations taken at Wilkes-Barre, Pa., for April, 1885, by E. L. Dana.
 (Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 46' 4.6''$)

Day.	THERMOMETER.					BAROMETER.					REMARKS.					
	Wind.	Clouds.	Avg. P. M.	Temp.	Alt. Th.	Wind.	Clouds.	Avg. P. M.	Temp.	Alt. Th.	Wind.	Clouds.	Avg. P. M.	Temp.	Alt. Th.	
1	32	o Fog.	1 S.	53	o	2 W.	41 41 1/2	o	29-79	84	85	83	2. Rain fall last night .13; River broke up this A. M.; stopped 5 P. M. .13 in.			
2	30	o Cir. S.	2 S.	49	5 Cir. Cu.	2 S.	36 38 1/2	9 Cir. S.	29-79	80	84	82	3. First robin and blue bird of season. Ice moved off 5 P. M.			
3	47	3 Cir. S.	2 N.	66	5 Cir. Cu.	2 S.	45 39 1/2	10 Nimb.	29-79	76	80	77	4 in. snow fell this morning. Rain last night .83; snow .29			
4	30	10 Nimb.	3 N.	31	10 Nimb.	3 N.	34 37 1/2	10 Str.	29-79	72	74	74	5 in. snow fell this morning. Rain last night .83; snow .29			
5	24	9	3 N.	44	10 Nimb.	3 S. W.	33 37 1/2	10 Nimb.	29-79	70	70	70	6 in. rain at 8:15 P. M., with thunder and lightning.			
6	38	5 Cu.	3 W.	45	3 Cir. Cu.	2 N.	32 37 1/2	10 Nimb.	29-79	67	70	70	7 in. rain fall last night .11; raining 12 M.; rain fall last night .11; raining 12 M.; rain fall P. M. .17			
7	38	o	1 S.	52	10 Cir.	2 S.	33 42	10 Nimb.	29-79	68	78	76	8 in. rain at 12 M. and 2 P. M.; slight rain falling at 12 M. and 2 P. M.			
8	38	o	1 W.	55	10 Nimb.	2 S. W.	32 38 1/2	o	29-79	66	70	70	9 in. rain fall 3 to 4:30 P. M.; melted .14 in.			
9	21	1 Cu.	2 N.	32	5 Cir.	1 N.	27 67 1/2	o	29-79	65	70	70	10 in. snow and rain at 6 P. M.; melted .05 in.			
10	26	10 Cir.	1 N.	41	9 Cir. Cu.	2 S. W.	32 32 1/2	o	29-79	64	68	68	11 in. slight rain at 6 P. M. and 8 P. M.			
11	27	o	1 N.	37	10 Nimb.	2 S. E.	32 32	10 Nimb.	1 N.	29-79	68	72	72	12 in. rain fall last night .15; rain .08 in.		
12	34	10 Nimb.	2 S. W.	42	4 Cir. Cu.	3 S. W.	32 35	o	1 S. W.	29-79	66	70	70	13 in. rain fall last night .15; rain .08 in.		
13	32	2 Cu.	2 S. W.	42	9 Cir. Cu.	2 W.	33 54 1/2	8 Nimb.	1 N. W.	29-79	65	70	70	14 in.		
14	25	8 Str.	2 N. W.	37	9 Cir.	2 N.	33 51 1/2	o	1 N. W.	29-79	64	70	70	15 in. rain fall 3 to 4:30 P. M.; melted .05 in.		
15	30	9 Cir.	1 N.	38	10 Nimb.	1 N. E.	35 34 1/2	10 Str.	o	29-79	64	70	70	16 in. rain fall last night .15; rain .08 in.		
16	33	o	2 N.	47	2 N.	2 N.	35 37 1/2	o	2 W.	29-79	68	72	72	17 in. rain fall last night .15; rain .08 in.		
17	28	3 N.	1 N.	47	5 Cir.	1 W.	43 42	o	o	29-79	74	66	82	18 in. rain fall last night .15; rain .08 in.		
18	35	4 Cir.	o	54	5 Cir.	1 S.	45 46	o	o	29-80	75	74	80	19 in. rain fall last night .15; rain .08 in.		
19	32	o	o	59	5 Cir.	2 S.	49 48 1/2	o	o	29-80	78	80	80	20 in. rain fall last night .15; rain .08 in.		
20	36	o	1 W.	68	o	2 W.	54 53	o	o	30-00	80	82	83	21 in. rain fall last night .15; rain .08 in.		
21	41	2 Cir.	1 W.	75	2 Cir.	1 W.	61 59 1/2	o	o	29-83	86	86	86	22 in. rain fall last night .15; rain .08 in.		
22	52	o	o	81	o	2 W.	67 66 1/2	1 S. W.	29-74	85	87	87	23 in. rain fall last night .15; rain .08 in.			
23	53	o	1 W.	84	o	1 W.	67 67 1/2	o	29-72	86	87	87	24 in. rain fall last night .15; rain .08 in.			
24	55	o	1 S. W.	78	o	1 S. W.	61 64 1/2	o	29-75	84	87	87	25 in. rain fall last night .15; rain .08 in.			
25	50	8 Cu. S.	2 N. W.	61	o	1 N.	56 55 1/2	o	29-66	84	87	87	26 in. rain fall last night .15; rain .08 in.			
26	50	10 Nimb.	2 S. W.	52	5 Cir. Cu.	2 W.	48 47 1/2	74	29-67	84	87	87	27 in. rain fall last night .15; rain .08 in.			
27	48	o	2 S. W.	64	2 Cu.	2 W.	53 54 1/2	1 S. E.	29-55	82	86	86	28 in. rain fall last night .15; rain .08 in.			
28	47	3 Cir. S.	1 N. W.	62	8 Cir. S.	2 S. N.	46 50 1/2	1 Cu. S.	2 N.	29-43	78	82	82	29 in. rain fall last night .15; rain .08 in.		
29	34	4 Cu.	2 W.	59	o	3 N. W.	44 43	o	29-37	71	72	72	30 in. rain fall last night .15; rain .08 in.			
30	40	10 Str.	1 N.	68	4 Cir. Cu.	1 N. W.	57 55 1/2	2 Cir. Cu. 1 N.	29-37	77	79	79	31 in. rain fall last night .15; rain .08 in.			

Total rain fall for April, 1885.

Total rain fall for April, 1884.

Average temperature 44°

Meteorological Observations taken at Wilkes-Barre, Pa., for May, 1885, by E. L. Dana.

Meteorological Observations taken at Wilkes-Barre, Pa., for June, 1885, by E. L. Dana.
 (Latitude $41^{\circ} 14' 40''$ Longitude West $10^{\circ} 46' 6''$)

THERMOMETER.												BAROMETER.												REMARKS.		
Day.	Clouds.			Wind.			Wind.			Wind.			Atmos.			Atmos.			Atmos.			Atmos.			Remarks.	
	A.M.	P.M.	N.	A.M.	P.M.	N.	A.M.	P.M.	N.	A.M.	P.M.	N.	A.M.	P.M.	N.	A.M.	P.M.	N.	A.M.	P.M.	N.	A.M.	P.M.	N.		
1	60	o	2 W.	74	3 Cir. Cu.	60	63 1/2	o	1 S.	29.25	74	29.20	74	29.30	76	1. Rain fall last night	2 P.M.	5. Rain	8 P.M.	7. Slight showers	10 P.M.	8. Thunder shower to last night	12 A.M.	18 in.	.21 in.	
2	58	o	1 W.	72	2 Cu.	57	66	o	1 Str.	29.40	68	29.40	74	29.52	73	5. Rain	2 P.M.	7. Slight showers	8 P.M.	8. Thunder shower to last night	10 P.M.	9. Shower 4 P.M.	12 A.M.	18 in.	.21 in.	
3	53	o	2 E.	74	2 Cir.	1 W.	64 1/3	3 1/4	1 Cu.	29.44	76	29.53	73	29.56	73	8. Thunder shower to last night	2 P.M.	9. Minimum cold last night 46°	8 P.M.	10. Minimum cold last night 43°	10 P.M.	11. Shower 5:50 to 6:05 P.M.	12 A.M.	42 in.	.21 in.	
4	64	to Nimb.	5 Cir. S.	65	7 Cir. Cu.	7 Cu.	62 1/2	12 1/2	8 Cir. S.	29.06	76	29.05	70	29.28	74	9. Minimum cold last night 43°	2 P.M.	10. Rain last night and this A.M.	8 P.M.	11. Rain last night and this A.M.	10 P.M.	12. Rain last night and this A.M.	12 A.M.	.21 in.		
5	68	5 Cir. S.	1 S. W.	65	9 Cu.	72	67 1/2	3 1/2	1 S. W.	29.50	68	29.50	73	29.50	73	10. Rain last night and this A.M.	2 P.M.	11. Rain last night and this A.M.	8 P.M.	12. Rain last night and this A.M.	10 P.M.	13. Rain last night and this A.M.	12 A.M.	.21 in.		
6	53	o	1 E.	73	3 Cir. S.	1 W.	62 1/2	12 1/2	2 S. W.	29.44	71	29.33	70	29.28	68	11. Rain last night and this A.M.	2 P.M.	12. Rain last night and this A.M.	8 P.M.	13. Rain last night and this A.M.	10 P.M.	14. Rain last night and this A.M.	12 A.M.	.21 in.		
7	63	9 Cu. S.	2 W.	71	3 Cir. S.	1 S. W.	75	69	8 Cir. S.	29.44	75	29.50	72	29.60	73	15. Sprinkle of rain 8 A.M.: trained from 2 P.M.	2 P.M.	16. Rain last night and this A.M.	8 P.M.	17. Rain last night and this A.M.	10 P.M.	18. Rain last night and this A.M.	12 A.M.	.21 in.		
8	67	10 Cir. S.	2 S. W.	77	5 Cir. Cu.	60	56	64	o	2 N. W.	29.44	75	29.50	72	29.60	73	19. Rain last night and this A.M.	2 P.M.	20. Rain last night and this A.M.	8 P.M.	21. Rain last night and this A.M.	10 P.M.	22. Rain last night and this A.M.	12 A.M.	.21 in.	
9	51	5 Cir. S.	2 W.	63	o	2 N. W.	55	56	o	1 W. W.	29.73	66	29.70	72	29.70	65	23. Rain last night and this A.M.	2 P.M.	24. Rain last night and this A.M.	8 P.M.	25. Rain last night and this A.M.	10 P.M.	26. Rain last night and this A.M.	12 A.M.	.20 in.	
10	59	o	1 S. W.	71	2 Cir.	2 S. W.	60	60 1/2	o	2 S. W.	29.72	70	29.63	75	29.65	72	27. Rain last night and this A.M.	2 P.M.	28. Rain last night and this A.M.	8 P.M.	29. Rain last night and this A.M.	10 P.M.	30. Rain last night and this A.M.	12 A.M.	.20 in.	
11	53	o	1 W.	78	1 Cir. Cu.	66	65 1/2	o	2 S. W.	29.67	72	29.60	76	29.61	80	31. Rain last night and this A.M.	2 P.M.	32. Rain last night and this A.M.	8 P.M.	33. Rain last night and this A.M.	10 P.M.	34. Rain last night and this A.M.	12 A.M.	.20 in.		
12	53	o	1 Cir.	83	4 Cir.	2 S. W.	71	71 1/2	8 Str.	29.66	74	29.50	82	29.44	81	35. Rain last night and this A.M.	2 P.M.	36. Rain last night and this A.M.	8 P.M.	37. Rain last night and this A.M.	10 P.M.	38. Rain last night and this A.M.	12 A.M.	.20 in.		
13	65	1 Cir.	2 W.	83	6 Cir. S.	78	75 1/2	3 1/2	1 N.	29.38	72	29.38	84	29.46	84	39. Total rain fall for June, 1884	2 P.M.	40. Total rain fall for June, 1884	8 P.M.	41. Total rain fall for June, 1884	10 P.M.	42. Total rain fall for June, 1884	12 A.M.	.24 in.		
14	73	o	2 W.	84	2 Cir.	3 W.	72	73 1/2	o	1 N. S.	29.56	74	29.50	81	29.46	83	43. Average temperature 66 2/3 °	2 P.M.	44. Average temperature 66 2/3 °	8 P.M.	45. Average temperature 66 2/3 °	10 P.M.	46. Average temperature 66 2/3 °	12 A.M.	.24 in.	
15	64	6 Cir.	1 N.	82	3 Cir.	2 S.	72	72	o	1 W. S.	29.46	78	29.42	85	29.46	82	47. Average temperature 66 2/3 °	2 P.M.	48. Average temperature 66 2/3 °	8 P.M.	49. Average temperature 66 2/3 °	10 P.M.	50. Average temperature 66 2/3 °	12 A.M.	.24 in.	
16	69	8 Cu. S.	1 S. W.	87	4 Cir.	1 S. W.	64	64 1/2	4 Cir. S.	29.49	71	29.56	73	29.57	70	51. Average temperature 66 2/3 °	2 P.M.	52. Average temperature 66 2/3 °	8 P.M.	53. Average temperature 66 2/3 °	10 P.M.	54. Average temperature 66 2/3 °	12 A.M.	.24 in.		
17	54	8 Cu. S.	1 S. W.	69	4 Cir.	1 S. W.	66	66 1/2	o	1 W.	29.67	72	29.62	74	29.63	75	55. Average temperature 66 2/3 °	2 P.M.	56. Average temperature 66 2/3 °	8 P.M.	57. Average temperature 66 2/3 °	10 P.M.	58. Average temperature 66 2/3 °	12 A.M.	.24 in.	
18	53	o	2 W.	67	1 Cir. Cu.	1 W.	65	65 1/2	o	1 W.	29.67	72	29.62	74	29.63	75	59. Average temperature 66 2/3 °	2 P.M.	60. Average temperature 66 2/3 °	8 P.M.	61. Average temperature 66 2/3 °	10 P.M.	62. Average temperature 66 2/3 °	12 A.M.	.24 in.	
19	52	o	1 W.	78	o	2 W.	67	67	o	2 S. W.	29.67	71	29.65	76	29.65	70	63. Average temperature 66 2/3 °	2 P.M.	64. Average temperature 66 2/3 °	8 P.M.	65. Average temperature 66 2/3 °	10 P.M.	66. Average temperature 66 2/3 °	12 A.M.	.24 in.	
20	52	o	1 Cir. S.	87	3 Cir. Cu.	2 W.	73	73	2 S. W.	29.67	72	29.59	77	29.57	70	67. Average temperature 66 2/3 °	2 P.M.	68. Average temperature 66 2/3 °	8 P.M.	69. Average temperature 66 2/3 °	10 P.M.	70. Average temperature 66 2/3 °	12 A.M.	.24 in.		
21	68	3 Cir. S.	2 S. W.	87	3 Cir. Cu.	3 S. W.	75	64 1/2	5 Cir.	29.45	76	29.39	82	29.34	75	71. Average temperature 66 2/3 °	2 P.M.	72. Average temperature 66 2/3 °	8 P.M.	73. Average temperature 66 2/3 °	10 P.M.	74. Average temperature 66 2/3 °	12 A.M.	.24 in.		
22	68	o	2 W.	73	2 Cir. Cu.	2 W.	62	68 1/2	o	2 N.	29.26	76	29.32	84	29.40	75	75. Average temperature 66 2/3 °	2 P.M.	76. Average temperature 66 2/3 °	8 P.M.	77. Average temperature 66 2/3 °	10 P.M.	78. Average temperature 66 2/3 °	12 A.M.	.24 in.	
23	54	o	1 W. S.	78	o	1 S. W.	67	68 1/2	o	2 N.	29.55	68	29.49	70	29.58	74	80. Average temperature 66 2/3 °	2 P.M.	81. Average temperature 66 2/3 °	8 P.M.	82. Average temperature 66 2/3 °	10 P.M.	83. Average temperature 66 2/3 °	12 A.M.	.24 in.	
24	62	o	2 S. W.	78	o	1 S. W.	67	68 1/2	o	2 N.	29.68	67	29.65	74	29.65	73	85. Average temperature 66 2/3 °	2 P.M.	86. Average temperature 66 2/3 °	8 P.M.	87. Average temperature 66 2/3 °	10 P.M.	88. Average temperature 66 2/3 °	12 A.M.	.24 in.	
25	56	3 Cir. S.	1 S. W.	81	1 Cir. Cu.	1 S. W.	63	68 1/2	o	2 N.	29.70	68	29.64	70	29.66	70	90. Average temperature 66 2/3 °	2 P.M.	91. Average temperature 66 2/3 °	8 P.M.	92. Average temperature 66 2/3 °	10 P.M.	93. Average temperature 66 2/3 °	12 A.M.	.24 in.	
26	61	10 Cir. S.	1 S. W.	79	3 Cir. Cu.	2 S. W.	72	72 1/2	1 Cir. S.	29.62	74	29.54	76	29.50	80	95. Average temperature 66 2/3 °	2 P.M.	96. Average temperature 66 2/3 °	8 P.M.	97. Average temperature 66 2/3 °	10 P.M.	98. Average temperature 66 2/3 °	12 A.M.	.24 in.		
27	64	10 Cu.	1 S. S.	83	10 Nimb.	1 S. W.	72	73 1/2	1 Cir. S.	29.54	80	29.36	82	29.34	78	101. Average temperature 66 2/3 °	2 P.M.	102. Average temperature 66 2/3 °	8 P.M.	103. Average temperature 66 2/3 °	10 P.M.	104. Average temperature 66 2/3 °	12 A.M.	.24 in.		
28	60	8 Cu.	3 N.	61	9 Cu.	2 N.	55	66 1/2	2 N.	29.30	68	29.37	72	29.33	70	107. Average temperature 66 2/3 °	2 P.M.	108. Average temperature 66 2/3 °	8 P.M.	109. Average temperature 66 2/3 °	10 P.M.	110. Average temperature 66 2/3 °	12 A.M.	.24 in.		
29	56	o	3 N.	63	5 Cir. Cu.	3 N.	58	58 1/2	o	3 N.	29.34	68	29.30	68	29.34	70	113. Average temperature 66 2/3 °	2 P.M.	114. Average temperature 66 2/3 °	8 P.M.	115. Average temperature 66 2/3 °	10 P.M.	116. Average temperature 66 2/3 °	12 A.M.	.24 in.	

METEOROLOGICAL OBSERVATIONS.

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Meteorological Observations taken at Wilkes-Barre, Pa., for July, 1885, by E. L. Dana.

(Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 40' 4.6''$)

THERMOMETER.		BAROMETER.		REMARKS.	
Day.	N.	Clouds.	Wind.	At. T. ^o	T. ^o
7 A. M.	W.	Clouds.	Wind.	At. T. ^o	T. ^o
1	59	○	2 S. W.	69	4 Cu.
2	52	10 Str.	1 W.	63	9 Cu. S.
3	51	10 Str.	2 W.	60	83/4 Nimb.
4	53	4 Cir.	1 W.	64	63/4 S.
5	63	○	1 N. E.	66	65/4 N.
6	66	3 Cir. Cu.	1 W.	68	70
7	72	7 Cir. Cu. S.	2 W.	73	75
8	67	3 Cir. Cu. N.	2 S. W.	70	73 1/2
9	68	3 Cir.	3 W.	74	74 1/2
10	68	2 Cir.	1 W.	78	74
11	52	1 Cir.	2 W.	72	72
12	55	○	1 Cir. S.	76	72
13	53	1 Cir. S.	1 N. W.	73	71
14	63	10 Nimb.	1 W.	77	5 Cir.
15	64	○	1 W.	78	3 Cir. Cu.
16	64	○	1 W.	79	3 Cir. Cu. S.
17	67	○	1 W.	81	79 1/2
18	75	1 Cir.	1 W.	81	74
19	64	○	1 N. W.	85	74
20	68	2 Cir.	1 W.	89	75 1/2
21	70	1 Cir.	1 S. W.	93	72
22	74	1 Cir.	1 N.	84	7 Cir. Cu.
23	68	6 Cir.	1 N.	90	8 Cu. S.
24	76	Cu. S.	2 S.	85	89 Cu.
25	73	3 Cir. Cu.	1 W.	87	6 Cu. S.
26	71	5 Cir.	1 S.	79	9 Cu. S. N.
27	67	10 Str.	1 N.	81	2 Cir. S.
28	64	5 Cir.	1 N.	83	9 Cu.
29	73	7 Cir. Cu.	1 S. W.	88	1 Cir. W.
30	73	1 Cir.	1 W.	79	70 1/2
31	63	○	1 Cir.	80	73 1/2

2 S. W.	2 W.	59	63 1/2	○	1. Minimum last night 50°
2 W.	1 W.	60	63 1/2	2 S. W.	2. Raining at 9 P. M.
1 W.	2 Cir. S.	62	63 1/2	1 W.	3. Rain last night
2 Cir. S.	1 N.	64	65 1/2	1 N.	.08 in.
1 N.	66 1/2	65 1/4	6	4. Rain at 1 P. M. . . . .	.05 in.
6	68 1/2	69 1/2	76	5. Slight shower	
76	70 1/2	79 1/2	78	6. Rain this A. M., till 1 P. M.	
78	79 1/2	82	80 1/2	7. Rain shower in P. M. . . . .	.34 in.
82	84	84	84	8. Rain fall yesterday and last night . . . . .	.52 in.
84	88	88	80	9. Rain fall this A. M. 19; this P. M., .06	.25 in.
80	80	80	80	10. Slight rain 9 P. M.	
80	80	80	80	11. Rain fall last night	
80	80	80	80	12. Rain fall last night	
80	80	80	80	13. Begn raining at 6 P. M.; rained again at 9 P. M.	
80	80	80	80	14. Rain fall last night	
80	80	80	80	15. Rain fall 10 P. M.	
80	80	80	80	16. Rain fall 6:30 P. M.	
80	80	80	80	17. Slight shower during the day; rain fall	
80	80	80	80	18. Shower at 1:00 M. to-day	
80	80	80	80	19. Total rain fall for July, 1884 . . . . .	.39 in.
80	80	80	80	20. Total rain fall for July, 1885 . . . . .	.49 in.
80	80	80	80	21. Average temperature 72°	

Meteorological Observations taken at Wilkes-Barre, Pa., for August, 1885, by E. L. Dana.
 Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 46' 46''$

REMARKS.												
THERMOMETER.												
Day.	Clouds.	Wind.	Wind.	Average Temp.	Temp. M.	Temp. H.	At P. M.	At M.	At H.	At P. M.	At M.	
1	o	88	1 Cir.	2 W.	67	72	10 Nimb.	2 N.	29.40	72.36	86	
2	9 Str.	81	4 Cir. Cu.	1 S.	72	73	10 Str.	o	29.44	72.29	86	
3	9 Nimb.	1 N.	10 Nimb.	1 S.	66	67	8 Str.	o	29.30	72.30	86	
4	2 S. W.	79	4 Cir.	2 S. W.	66	69	o	29.27	72.23	86		
5	62 o Fog.	74	5 Cir. Cu.	2 W.	64	64	1 N.	o	29.40	72.07	86	
6	55	2 N.	60	60	61	61	1 N.	29.60	72.29	85		
7	79	9 Cir. S.	1 N.	60	60	59	10 Nimb.	1 N. E.	29.50	72.29	84	
8	6	6 Cir.	6 Cir.	6 Cir.	66	66	10 Nimb.	1 N. L.	29.60	72.29	83	
9	61	1 S. W.	74	5 Cir.	1 S. S.	68	68	9 Cu. S.	1 S. W.	29.54	72.29	82
10	66	7 Cir. Cu.	70	10 Cu.	72	72	10 Str.	o	29.56	72.29	81	
11	70	9 Cir. S.	1 W.	82	74	74	10 Cir. Cu.	1 S. W.	29.56	72.29	80	
12	70	79	1 S. W.	85	84	84	4 Cir. Cu.	2 S.	29.53	72.29	79	
13	78	8 Cir. S.	1 S. W.	75	75	75	10 Str.	10 Str.	29.53	72.29	78	
14	58	7 Cir. Cu.	2 W.	75	75	75	10 Cir. Cu.	2 S.	29.53	72.29	77	
15	61	5 Cir. Cu.	5 Cir. Cu.	5 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	76	
16	59	1 N.	67	5 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	75	
17	55	1 W.	74	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	74	
18	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	73	
19	58	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	72	
20	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	71	
21	55	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	70	
22	55	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	69	
23	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	68	
24	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	67	
25	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	66	
26	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	65	
27	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	64	
28	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	63	
29	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	62	
30	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	61	
31	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	60	
32	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	59	
33	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	58	
34	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	57	
35	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	56	
36	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	55	
37	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	54	
38	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	53	
39	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	52	
40	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	51	
41	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	50	
42	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	49	
43	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	48	
44	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	47	
45	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	46	
46	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	45	
47	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	44	
48	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	43	
49	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	42	
50	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	41	
51	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	40	
52	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	39	
53	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	38	
54	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	37	
55	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	36	
56	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	35	
57	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	34	
58	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	33	
59	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	32	
60	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	31	
61	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	30	
62	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	29	
63	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	28	
64	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	27	
65	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	26	
66	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	25	
67	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	24	
68	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	23	
69	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	22	
70	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	21	
71	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	20	
72	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	19	
73	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	18	
74	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	17	
75	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	16	
76	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	15	
77	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	14	
78	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	13	
79	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	12	
80	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	11	
81	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	10	
82	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	9	
83	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	8	
84	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	7	
85	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	6	
86	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	5	
87	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	4	
88	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	3	
89	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	2	
90	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	1	
91	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	0	
92	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-1	
93	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-2	
94	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-3	
95	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-4	
96	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-5	
97	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-6	
98	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-7	
99	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-8	
100	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-9	
101	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-10	
102	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-11	
103	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-12	
104	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-13	
105	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-14	
106	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-15	
107	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-16	
108	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-17	
109	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-18	
110	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-19	
111	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-20	
112	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-21	
113	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-22	
114	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-23	
115	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-24	
116	59	1 S. W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-25	
117	59	1 W.	75	7 Cir. Cu.	75	75	10 Cir. Cu.	2 S.	29.53	72.29	-26	
118	59	1 S. W.	75	7 Cir. Cu.	75	75						

Meteorological Observations taken at Wilkes-Barre, Pa., for September, 1885, by E. L. Dana.

(Latitude $41^{\circ} 14' 40.4''$ Longitude West $r^{\circ} 10' 4.6''$)

Day.	THERMOMETER.			BAROMETER.			REMARKS.		
	7 A.M.	2 P.M.	9 P.M.	7 A.M.	2 P.M.	9 P.M.	A.M. Th.	2 P.M.	9 P.M.
1	56	70	79	70	79	80	2 W.	57	60 1/2
2	56	70	79	70	79	80	W.	53	53
3	45	68	74	51	65	72	W.	51	53
4	58	68	74	52	65	72	2 Cir. S.	51	53
5	48	63	70	54	65	72	2 Cir. S.	51	53
6	58	63	70	54	65	72	1 N.	51	53
7	52	68	74	54	67	74	1 N.	51	53
8	54	70	78	54	70	78	9 Cu. S.	51	53
9	55	70	78	53	67	74	1 N.	51	53
10	53	70	78	52	65	72	9 Cir. S.	51	53
11	55	70	78	52	65	72	1 N.	51	53
12	52	68	74	50	60	72	1 W.	51	53
13	52	68	74	50	60	72	1 N.	51	53
14	67	77	82	64	72	74	2 S. W.	67	67 1/2
15	52	68	74	50	60	72	4 Cir.	50	50 1/2
16	52	68	74	50	60	72	4 Cir.	50	50 1/2
17	45	66	74	50	60	72	5 Cir.	50	50 1/2
18	48	66	74	50	60	72	6 Cir.	50	50 1/2
19	60	70	74	60	62	72	7 Cir.	60	62 1/2
20	52	66	70	55	62	72	8 Cir. S.	55	57
21	51	66	70	57	61	72	1 Cir. S.	59	59
22	57	70	74	67	71	74	1 W.	59	61 1/2
23	44	60	71	8	71	74	2 W.	43	45
24	45	68	70	4	70	72	3 Cir. Cu.	56	55 1/2
25	48	66	70	3	70	72	2 Cir. Cu.	57	58
26	49	66	70	0	70	72	3 Cir. Cu.	62	64
27	54	70	74	0	70	72	1 N.	64	64 1/2
28	55	70	74	0	70	72	1 N.	63	64 1/2
29	55	70	74	0	70	72	1 N.	63	64 1/2
30	58	70	74	0	70	72	1 N.	64	65 1/2

3. Minimum last night, -43° , rain this even-

ing at 7. * Rain at about 4 P.M.

4. Rain at 2 P.M. to 6 P.M.

5. Rain last night, 08, this P.M. up to 5 P.M.

6. Minimum last night, -46° .

8. Rain 2 P.M. to 6 P.M.

9. Rain last night.

10. Slight rain in evening.

11. Rain in evening.

12. Rain fall last night.

13. Rain fall last night.

14. Slight frost; minimum last night, $38\frac{1}{2}$ °.

Total rain fall for September, 1885.

Total rain fall for September, 1884.

Average temperature 60° .

29.63 68 29.66 72 29.63 74

29.60 72 29.53 73 29.31 74

29.20 76 29.18 79 29.30 77

29.43 73 29.50 74 29.66 74

29.70 73 29.70 72 29.70 72

29.70 71 29.70 72 29.61 72

29.53 72 29.48 72 29.41 78

29.44 72 29.35 80 29.46 83

29.42 71 29.47 71 29.63 70

29.77 70 29.74 71 29.73 70

29.70 70 29.66 75 29.65 78

29.64 73 29.57 76 29.54 77

29.72 70 29.67 71 29.74 74

29.66 69 29.66 71 29.58 75

29.38 72 29.14 74 29.01 77

29.20 72 29.23 72 29.37 74

29.43 68 29.30 71 29.44 76

29.60 72 29.66 75 29.74 79

29.80 73 29.72 76 29.72 82

29.70 74 29.62 79 29.67 81

29.70 76 29.62 80 29.65 81

29.65 71 29.60 84 29.59 82

29.55 74 29.47 78 29.50 79

Meteorological Observations taken at Wilkes-Barre, Pa., for October, 1835, by E. L. Dana.

(Latitude 41° 14' 40.4" Longitude West 10° 46")

Day.	THERMOMETER.			BAROMETER.			REMARKS.		
	7 A. M.	9 A. M.	1 P. M.	7 A. M.	9 A. M.	1 P. M.	At. T.	At. T.	At. T.
1	56 to Str.	80	1 S. W.	W.	66 1/2	o	29.52	75	29.51
2	56 to Cir. S.	63	1 S. W.	1 S.	58 1/2	o	29.47	73	29.44
3	68 to Nimb.	71	8 Cir.	Nimb.	66 1/2	o	29.30	72	29.10
4	20 to Str.	52	1 S. W.	2 W.	52 1/2	o	29.10	80	29.17
5	41 to Cir.	54	8 Cir.	S. E.	47 4/8	10	29.51	73	29.47
6	42 to Str.	49	10 Str.	1 N.	41 43/4	o	29.55	72	29.56
7	40 to Cir. S.	41	5 Cir.	1 N.	47 41/4	o	29.63	72	29.60
8	39 to Nimb.	59	5 Cir.	1 N. W.	37 43/4	o	29.69	70	29.67
9	45 to Str.	54	1 S. W.	42 45/4	o	29.72	74	29.72	22.
10	44 to Str.	63	o	46 49	o	29.77	75	29.69	River 12 feet +
11	40 to Str.	66	o	49 49 1/2	o	29	73	29.62	Frost.
12	43 to S. E.	61	10 Str.	1 W.	52 1/2	o	29	72	29.70
13	46 to Str.	59	5 Cir. S.	3 E.	59 60 1/4	5 Str.	29	74	29.43
14	59 to Str.	54	10 Str.	2 W.	53 1/4	9 Str.	29	73	29.15
15	51 to Str.	54	10 Str.	1 N.	48 50 1/2	8 Cir.	29	74	29.30
16	42 o	62	o	49 50 1/2	1 Cu.	1 S. W.	29	75	29.78
17	44 o	64	4 Cu. S.	1 S.	50 52	1 N.	29	75	29.45
18	42 o	67	4 Cir. S.	2 S.	53 53 1/4	3 Cir.	29	75	29.47
19	46 o	69	10 Cu. S.	2 S.	62 59 1/4	3 Cu. S.	29	74	29.50
20	62 9 Cu. S.	70	5 Cir. Cu.	3 S. E.	64 66	9 Cu. S.	29	72	29.48
21	48 to Nimb.	42	10 Nimb.	1 N. W.	49 42 1/2	9 Cir. S.	29	78	29.50
22	42 to Str.	59	4 Cir. S.	1 W.	38 42	2 Cir.	29	75	29.54
23	32 o Fog.	59	6 Cu. S.	1 W.	45 44 1/4	7 Cir.	29	73	29.55
24	41 7 Cu.	59	1 N.	1 N.	49 40 1/4	o	29	76	29.60
25	33 o	53	o	49 41 1/2	o	29	72	29.64	
26	36 o Fog.	61	o	47 47 1/2	o	29	73	29.56	
27	37 o Fog.	63	2 W.	46 48	o	29	76	29.47	
28	37 Fog.	61	10 Str.	1 S.	57 53	2 Cir.	29	76	29.48
29	39 to Cir. S.	52	10 Nimb.	1 N.	52 54 1/2	10 Nimb.	29	76	29.48
30	42 to Cir. S.	34	10 Nimb.	2 N.	34 37	10 Cir. Cu.	29	78	29.68
31	31 2 Cu.	34	1 N. W. 40 o	2 W.	34 34 1/4	o	29	71	29.52

Rain fall last night and this morning 64 in.

Rained last night and since 10:30 this A.M. 62 in.

Rain fell last night and before 9 this A.M. 12 in.

Rain fell early afternoon 27 in.

" " " 11 in.

Began raining in night at 12 M. ; rain 1.82 in.

fall 1.69 ; since this 1.82 in.

River 12 feet +

Frost.

Min. last night 32°

Sprinkle of rain at noon ; raining at 6

and 9 P.M.

Rain fall last night 87 ; flurry of snow 2

P.M. 87 in.

Total rain fall for October 184 4.45 in.

Total rain fall for November 184 3.44 in.

Average temperature 50°

Meteorological Observations taken at Wilkes-Barre, Pa., for November, 1885, by E. L. Dana.

(Latitude $41^{\circ} 14' 40.4''$
Longitude West $10^{\circ} 46' 4.6''$)

Day.	THERMOMETER.			BAROMETER.			REMARKS.						
	7 A. M.	2 P. M.	9 P. M.	7 A. M.	2 P. M.	9 P. M.	At. Th.	9 A. M.	2 P. M.				
1	26	Cir. S.	2 S.	46	9 Cir. Cu.	2 S.	45 49%	10 Nimb.	2 S.	29-63 72	29-53 83	29-45 80	1 Minimum last night, 24°; raining in evening.
2	39	10 Nimb.	1 S.	47	9 Cu.	2 S. W.	41 42	10 Cir. S.	2 S. W.	29-26 75	29-31 86	29-44 76	2 Rain last night.
3	39	2 Cir. Cu.	1 W.	43	10 Nimb.	2 S. W.	39 40	10 Str.	2 S. W.	29-55 76	29-50 85	29-43 80	7. Rain fall last night up to 5 P. M., .86;
4	49	40 Cu. S.	2 S. W.	51	0	2 S. W.	43 44%	10 Cir. S.	1 S. W.	29-48 82	29-42 83	29-45 82	8. Rain fall all last night .86 in.
5	47	9 Cir.	1 W.	63	2 Cir.	1 S. S.	53 53%	10 Cir. S.	2 S.	29-55 83	29-53 82	29-53 85	9. Rain fall all last night .86 in.
6	47	0	1 S.	68	2 Cir.	1 S. S.	63 60%	9 Cir.	2 S.	29-54 80	29-47 86	29-40 81	13. Rain fall last night 24°.
7	65	10 Nimb.	0	68	10 Nimb.	1 S. W.	68 67%	10 Str.	2 S. S.	29-44 80	29-35 84	29-32 83	14. Minimum last night 24°.
8	58	10 Nimb.	0	55	10 Nimb.	1 N.	52 53%	10 Nimb.	0	29-39 78	29-33 78	29-39 80	15. Rain fall last night, .19; to-day, .18;
9	44	2 Cir. Cu.	1 S. W.	48	10 Cu. S.	2 W.	45 45%	10 Str.	1 S. W.	29-41 79	29-39 78	29-45 78	altogether .37 in.
10	41	6 Nimb.	1 S. W.	45	7 Cu.	2 W.	40 43%	1 Cir. S.	1 N.	29-50 75	29-49 81	29-35 80	21. Snowing in A. M.; rain at 2 P. M.; rain fall .05 in.
11	36	4 Cir.	1 W.	52	0	1 W.	42 43%	1 Cir. S.	1 S. S.	29-32 74	29-26 83	29-29 82	22. Raining at 9 P. M.
12	36	3 Cir. S.	1 S.	63	3 Cir.	1 W.	48 48%	1 Cir. S.	0	29-20 78	29-14 80	29-35 78	23. Rain fall last .27; to-day, .21; snowing .48 in.
13	38	0 Fog.	0	57	9 Nimb.	2 S. S.	49 49%	10 Nimb.	1 S. W.	29-34 74	29-19 76	29-19 74	at 9 P. M.
14	39	0	1 S. W.	45	0	1 S. W.	38 37%	3 Cir.	1 W.	29-24 70	29-35 75	29-35 75	24. Snowing 7 A. M.; rain and snow fall, .85;
15	32	6 Cir.	1 S. W.	40	9 Cu. S.	2 W.	34 34%	6 Cir.	1 W.	29-50 73	29-52 75	29-56 77	25. at 2 P. M., .09
16	32	6 Cir.	1 S. W.	41	10 Cu. S.	2 W.	37 36%	10 Str.	1 W.	29-65 74	29-65 76	29-62 80	Snow fall at 8 A. M. melted, 1.31
17	27	3 Cir.	1 S. W.	45	4 Cir.	1 S. W.	38 39%	1 Cir. S.	0	29-47 73	29-38 81	29-20 80	26. Snow fall yesterday, melted .14 in.
18	33	5 Cir.	1 S. W.	54	5 Cir. S.	1 S. E.	51 47%	10 Cu. S.	1 W.	29-14 77	29-18	29-34 80	29. Dense fog all day.
19	46	10 Nimb.	0	38	10 Nimb.	1 N.	37 38%	6 Cir.	2 N.	29-38 71	29-74	29-26 82	Total rain fall and melted snow, 5.25 in.
20	29	2 Cir.	1 N.	39	0	1 N.	31 32%	4 Cir.	1 S.	29-20 73	29-19 81	29-24 77	Total rain fall for November, .884; 3.28 in.
21	31	10 Nimb.	1 S.	40	10 Nimb.	1 S. W.	36 35%	10 Cir. S.	0	29-30 76	29-30 76	29-34 78	Depth of snow .11 in.
22	26	4 Cir.	0	48	10 Cu. S.	1 S. W.	37 39%	10 Nimb.	1 N.	29-24 73	29-20 76	29-20 75	Average temperature, 40°
23	32	10 Nimb.	2 N.	34	10 Nimb.	2 N.	29 31	10 Nimb.	2 N.	29-23 74	29-20 75	29-20 75	
24	30	10 Nimb.	1 N.	31	10 Nimb.	1 N.	31 30%	10 Nimb.	0	29-30 71	29-44 73	29-35 72	
25	32	10 Nimb.	1 S.	39	10 Nimb.	1 S.	34 34%	10 Nimb.	0	29-64 68	29-56 70	29-57 72	
26	34	10 Nimb.	0	36	10 Nimb.	0	32 33%	10 Str.	0	29-54 62	29-54 72	29-60 78	
27	22	10 Nimb.	0	36	8 Str.	0	22 27%	10 Cir. S.	0	29-79 76	29-74 72	29-74 74	
28	13	10 Str.	2 N.	27	10 Cir. S.	1 W.	28 25%	10 Cir. S.	0	29-78 68	29-68 72	29-68 72	
29	19	0 Fog.	1 N.	29	0 Fog.	1 W.	24 24%	Fog.	1 S.	29-64 68	29-56 70	29-57 74	
30	18	0 Fog.	0	35	4 Cir. S.	2 E.	20 26%	0	0	29-54 62	29-54 72	29-60 78	

Meteorological Observations taken at Wilkes-Barre, Pa., for December, 1835, by E. L. Dana.
(Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 10' 4.6''$)

Day	THERMOMETER.				BAROMETER.				REMARKS.
	7 A. M.	9 A. M.	W _{Ind.}	Clouds.	7 A. M.	9 A. M.	W _{Ind.}	Clouds.	
1	31	0	10 Cir. S.	36	10 Cir. S.	1 N. E.	33	33 $\frac{1}{4}$	to Nimb.
2	32	9	Cu. S.	37	6	Cu. Cu.	2 W.	27 $\frac{3}{4}$	o
3	35	10	Nimb.	37	6	Cu. W.	30	33	4 Cir.
4	29	8	Cir. S.	39	10	Cir. S. W.	23	35	1 Cir.
5	37	8	Nimb.	37	3	Nimb.	23	30	o
6	21	0	2 S. W.	32	3	Cu. W.	12	13 $\frac{1}{4}$	2 Cir.
7	12	0	3 S. W.	17	2	Cir. Cu.	2 S.	29	23
8	7	1	1 S. W.	27	10	Cir.	51	54 $\frac{1}{4}$	10 Cir. Nimb.
9	4	0	0 Nimb.	55	10	Satr.	32	37	10 Str.
10	42	5	5 Cir. Cu.	42	5	Cir. Cu. 2 W.	25	28	1 N.
11	26	0	2 S. W.	36	3	Cir.	1 N.	29	27 o
12	22	1	1 Cir.	1	W.	31	0	29 $\frac{1}{2}$	o
13	27	0	0 S. Str.	44	10	Nimb.	44	39 $\frac{3}{4}$	10 Nimb.
14	23	0	0 S. Str.	49	10	Cir. S.	34	37	6 Cir.
15	24	0	1 S. Str.	31	6	Cir. Cu. 2 W.	29	14	10 Cir.
16	13	2	2 W.	37	1	Cir. Cu. 1 W.	31	34	o
17	39	5	5 Cir.	1 N.	39	9	Cir. Cu.	36	33 $\frac{1}{4}$
18	35	10	0 Nimb.	41	10	Cir. S.	33	32 $\frac{1}{2}$	10 Cir. Cu. 1 W.
19	37	4	Cir.	37	8	Cu. Cu.	32	32 $\frac{1}{2}$	2 Cir.
20	24	4	Cir. Cu.	28	0	3 W.	26	4	6 Cir.
21	22	31	10 Cir. S.	1 S. W.	42	9	Cir. Cu. 1 W.	40	39 $\frac{1}{4}$
22	31	10	8 Cir.	1 S. W.	55	10	Cir. S. 2 W.	35	33 $\frac{1}{2}$
23	30	6	6 Cu.	2 N.	31	5	Cir. Cu. 2 W.	42	42 $\frac{1}{4}$
24	39	6	Cu.	2 N.	32	5	Cir. Cu. 2 N.	26	32 $\frac{1}{2}$
25	29	0	o	31	2	Cir. Cu.	1 N.	26	25 $\frac{1}{4}$
26	15	0	2 N.	23	0	2 N.	13	16	o
27	13	0	2 N.	27	0	2 N.	26	23	1 E.
28	32	8	Cu.	1 S. W.	37	10	Cu. 2 W.	36	34 $\frac{3}{4}$
29	35	8	Cu.	2 N.	32	7	Cu. 1 W.	28	35 o
30	19	0	o	36	7	Cu. 1 W.	37	34 $\frac{1}{4}$	3 Str. 1 W.
31	13	7	10 Nimb.	1 S.	37	13 $\frac{1}{4}$	to Nimb. 1 S.	37	13 $\frac{1}{4}$

4. Snowing at 2:30 P. M.; $\frac{1}{2}$ in. melted, and .06 in. rain.
5. Rain and snow last night; .11 in. rain.
6. Minimum last night 5°; street in evening.
7. Raining all the A. M.; rain fall last night and to 1 P. M. to-day.
8. Snow 8:00 A. M., followed by rain 5 P. M.; rain fall.
9. Rain fall last night
10. Rain fall, followed by rain 5 P. M.; rain fall.
11. Rain fall yesterday and last night, .10 in.
12. Rain fall for December, 1834
13. Total rain fall for December, 1834
14. Slight flurry of snow.
15. Begun raining in P. M.
16. Rain fall yesterday and last night, .10 in.
17. Begun raining 5:10 A. M.; at 9 A. M. rain fall .29; at 5 P. M. .60; total
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Meteorological Observations taken at Wilkes-Barre, Pa., for January, 1886, by E. L. Dana.
(Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 10' 46.6''$)

Meteorological Observations taken at Wilkes-Barre, Pa., for January, 1886, by E. L. Dana.
 (Latitude $41^{\circ} 14' 40.4''$ Longitude West $10^{\circ} 10' 4.6''$)

THERMOMETER.		BAROMETER.		REMARKS.	
Day.	N.	Wind.	P. M.	Alt. Th.	Alt. Th.
7 A. M.	Clouds.	Wind.	9 P. M.	9 P. M.	9 P. M.
1	34 4 Cu.	0	1 N.	27 31% o	4. Rain last night, 93, to 5 P. M. to-day, 50;
2	22	1 W.	35 o	35 9% o	5. very high wind.
3	37	2 S. Str.	43 8 Cir. S.	10 Nimb.	6 S. E.
4	48	2 S. E.	40 49% o	10 Nimb.	6 S. E.
5	56	10 Nimb.	53 51% o	10 Nimb.	6 S. E.
6	27	9 Nimb.	35 0 Nimb.	2 S. W.	2 S. W.
7	9	10 Nimb.	24 0 Nimb.	2 W.	2 W.
8	6	11 N. E.	13 2 N.	1 N. E.	1 N. E.
9	10	11 Nimb.	14 4 Cir.	1 N. W.	1 N. W.
10	6	12 Nimb.	15 10 Cir.	1 S. W.	1 S. W.
11	7	8 Cir. Cu.	12 9 Cir.	2 S. W.	2 S. W.
12	5	4 Cir.	10 3 Cir.	2 W.	2 W.
13	11	0	8 0	2 S. W.	2 S. W.
14	13	0	6 0	0	0
15	18	0	15 0	o	o
16	12	o	30 10 Cir. S.	10 Nimb.	1 S. W.
17	17	20 Cir. S.	31 S. W.	29 10 Cir.	7 Cir.
18	13	9	37 4 Cir.	21 9% o	5 Cir.
19	25	10 Cir. S.	32 9 Cir.	21 19% o	1 S. W.
20	15	3 Cir.	34 1 N.	31 2% o	2 S. S.
21	20	15 Cir.	1 N.	25 3% o	9 Str.
22	30	10 Nimb.	31 1 S. W.	30 10 Cir.	2 N.
23	23	20 Cir. S.	37 1 S. W.	37 10 Cir.	5 Cir.
24	8	0	32 9 Cir. S.	31 9 Cir.	1 Cir. S.
25	19	10 Nimb.	31 9% o	12 4 Cir.	2 N.
26	25	11 Cir.	14 1 N.	9 8% o	1 N.
27	21	20 Cir.	28 1 N.	27 9 Cir. S.	1 W.
28	25	10 Cir.	36 10 Cir.	32 3% o	10 Cir.
29	27	20 Cir.	31 1 N. E.	31 3% o	1 N. N.
30	27	30 Cir.	33 1 N. E.	33 10 Nimb.	1 N. N.
31	22	27 to Nimb.	33 1 N. E.	35 3% o	10 Nimb.
32	29	33 to Nimb.	33 1 N. E.	31 3% o	1 N. N.
33	29	33 to Nimb.	34 9 Nimb.	20 2% o	1 N.
34	30	30 Nimb.	34 9 Nimb.	20 2% o	1 N.
35	31	9 Nimb.	31 1 N. E.	24 4 Cir. Cu.	1 S.
36	31	9 Nimb.	31 1 S.	22 24	4 Cir. Cu. o

THE REVEREND BERNARD PAGE, A. M.;

FIRST EPISCOPAL MINISTER OF WYOMING, A. D. 1771.

[Read before the Society, September 12, 1884, by SHELDON REYNOLDS, Esq.]

The history of the struggles of the early settlers of Wyoming has preserved in more or less detail the account of the several ministers of the gospel who succeeded one another in the infant colony, and also their work and influence in relation to the church, and the important events occurring during the first few years of the settlement. The clergyman was always an important man in the community in which he labored; and while he was occupied principally with the spiritual welfare of the people and the building up of the church, he nevertheless took a prominent part in the affairs of local government and other secular concerns affecting the prosperity of the settlement. He was educated, and usually bore one or more degrees of some approved institution of learning; he was a patron of schools and letters, and brought to his work much of the power and discriminating judgment which characterized the Puritan preacher of New England. His opinions were sought on important subjects, and were received with general respect. There is a reason, therefore, why local historians give prominence in their writings to an individual who bore such close relations to the whole people, and who was an actor in all the events affecting their well being.

The historians of Wyoming, however, seem to have had no record of the Rev. Bernard Page, as they nowhere mention the name or make any allusion to his ministry. I have been able to learn but little concerning him, even after much inquiry and search. He was ordained in London and assigned to the Wyoming parish in 1772; he was in Wilkes-Barré, however, the previous year, and doubtless was the

first minister of the Episcopal Church at Wyoming. He seems to have undertaken the mission in somewhat the spirit of the early martyrs, and despite the warnings and misgivings of his friends. His position was very different from, and far more trying than that of the other early ministers; they came in response to a call from the people, and found about them friends whom they had known for years; he came as a stranger, uninvited, with no one to receive him, and no provision made for his support, but animated nevertheless, with the spirit expressed in the words of the Master, "Go ye and preach the gospel."

The field of labor which he had chosen, though large, must have seemed to him very unpromising; the people were divided into two parties striving for the possession of the land; one of the contending parties was made up largely of soldiers of fortune who came in the interest and pay of the Pennsylvania claimants of the land, with the expectation and desire of no permanent residence, and whose hope of reward was very probably confined to things temporal. The other party was of another denomination, and looked upon the doctrines sought to be taught as unorthodox, at least, and who had in addition a spiritual guide of their own choosing.

Besides these discouragements the time of his arrival was inopportune; the Pennamite war had been waged for nearly three years with much bitterness, resulting in great destruction of property and considerable bloodshed. The Yankees had been expelled from the Valley five times, and as many times regained possession of the coveted territory. The value of the lands had become well understood by both parties, and the prize at stake fully appreciated. The proprietors of the Susquehanna Company, believing that the Colony of Connecticut was about to espouse their cause, and realizing the importance of an effort on their part which should in its effect prove final, had lately sent into the field

a force numbering about 150 men under the command of an experienced soldier. They found the enemy in possession of Fort Wyoming, a block house which had then recently been constructed by the Pennamites, situated on the River Common near the foot of Northampton street, and forthwith began a carefully planned siege. Selecting four positions about the block house; one a few rods west of it, also on the River Common, another on the opposite side of the river, a third at the Redoubt, and the fourth on the hill further toward the east, they conducted the investment with such vigor and skill that all communication between the garrison and the Proprietary Government was effectually cut off, and the several well equipped expeditions sent to their relief failed of the desired result. "So thorough was the investment," says Miner, "and so closely pressed, that not a man could venture out for food, fuel, or water, without being met by a volley from one of the redoubts. The garrison, containing nearly a hundred souls, soon felt the pressure of actual want, * * * and the dread of approaching famine." The siege beginning early in July was continued until the 14th day of August, 1771, when, reduced to the verge of starvation, and despairing of all hope of succor, the garrison surrendered, thereby leaving the Yankees in undisturbed possession of the place for several years.

Mr. Page, arriving upon the scene at such a juncture, seven days before the capitulation, was confronted with serious obstacles, and subjected to much inconvenience in pursuing his labors. His request to be allowed to preach to the people in the Block House was regarded with a natural, though unjust, suspicion, and as it seems was not granted; a doubt concerning the integrity of his purpose was entertained by the other party also.

Two of the following letters are copies in the handwriting of Colonel Butler. Any communication with the besieged

must necessarily have been submitted to his inspection, hence the copies.

The first letter is indorsed "Mr. Page's letter to both Parties."

AUGUST 7, 1771.

FELLOW SINNERS:

I have long had a hearty desire to see Wyoming; not for the sake of the land there but for the souls' health that are in possession of the same. It is now high time to apply for a remedy to cure your poor wounded souls; and I have an errand from my Lord and Master to you for that purpose. My weapons of war I have with me and with which I will, by God's leave, fight you, are these: the Girdle of Truth about my loins, the Breast-plate of Righteousness on my breast, the Shoes of Peace on my feet, the Shield of Faith in its place, the Helmet of Deliverance on my head, the Sword of the Spirit in my hand, the Threshing Instrument in my mouth, with a persevering spirit, and to these my Master will lend me his arm, wherewith I shall be able to fight the devil that reigns powerfully in many of your souls, and to quench all his fiery darts; and if I wound profoundly I won't leave you to perish in your blood, for I have the Universal Medicine with me, called the Balm of Gilead, which my Master has ordered me to apply to every one, without respect to persons, that is wounded by the above-named instruments, and to whomsoever this is applied it will surely heal. Remember, Noah was sent to warn and to heal before the Deluge; Lot to Sodom and Gomorrah before its destruction; and Jonah to Nineveh, to save the same, and these last immediately obeyed the voice of the Lord, in throwing down the rebellious arms and flying to Sovereign Arms for protection, and they were spared. Now, I am come in the strength of the great and grand General of the Armies of Israel to fight with the Powers of Darkness for your poor bruised souls, and I trust I shall, by the help of this General, be able to present many of you to King Jesus for a free and absolute pardon; but if you are determined not to hear my voice, my Master's orders are to shake off the dust of Wyoming that hangs on my feet that every atom thereof may be a swift witness against you in the great day of Judgment when all flesh must appear before him and give an account for the deeds done in the body.

Men and Brethren: I believe you will not reject my voice, but gladly hear it, and I heartily wish it may be a savior of life unto eternal life to those that shall hear it. I hear that the Devil is making sport with many of your poor benighted souls and I fear that the

impending hand of the Sword of the Lord will shortly strike on Wyoming if ten righteous are not found therein. Therefore, suffer me, my dear souls, to expostulate with you touching your souls only, for I long for the salvation of the same, yea my soul thirsteth for your souls more than many of your spirits do for blood. Some persons have advised me not to go to Wyoming, saying, "perhaps by one or the other party you may be killed." I replied, "if they be so brutish as to kill me for my errand to them and for the love and affections I have for their souls I am willing to die in my Master's service," and therefore, in the name of Jesus Christ, my loving and merciful Master, I am come to preach the glad tidings of Eternal Salvation to swearers, cursers, blasphemers, and drunkards, yea, and to murderers, if any such here be, and to present to and for them of them who believe, my Master gracious pardon for their souls, which, that all that stand in need of the same, may have, are the prayers, men and brethren, of your ready and willing servant, for Christ sake,

B. PAGE.

P. S.—I beg to have nothing to do with your secular affairs, and to be by myself until matters are settled.

To the Parties who contend for Wyoming.

THE MILL, Saturday, August ye 10th, 1771.

FELLOW SINNERS :

Mr. Arrison and some others that are within your house have sat under my ministry and Mr. Arrison knows me and my hand-writing perfectly well, and therefore this is agreed on by this party for me to preach here to-morrow morning and without-side of your house in the afternoon with two witnesses of this party ; but you must and I hope you will if I preach to you, assure this party that the persons that come with me shall in this case be in no more danger of losing their lives by you or any of your party than myself, nor in any respect whatever hurt. I am obliged to you for your salute yesterday ; but not for the ball in the piece, but providentially it took a tree instead of me ; surely both parties if determined for war, ought to have a prospect-glass. I remain your ready and willing servant for Christ sake.

B. PAGE.

P. S.—Herewith you receive a letter of mine directed to both parties, or a copy of the same, if you have not received it.

To the Leading Persons in the Block House.

THE MILL, Aug. 13, 1771.

MR. BUTLER:

You know that I do not know so much as you touching the other party, for I know no more than the old universal reports in the Jerseys, and if I were on the verge of Eternity and sensible of it I would, if required, take my Sacrament of the same. I have desired you and the rest of your party already to consider the sin of keeping me from them, as I came out of real love to both parties' souls, and I desire those voices that let and hinder me to read the 54th of Isaiah and the last verse.

But if you are still determined to hinder me, I am nevertheless heartily willing to preach to your party, whenever it is convenient; as it will not do for me to appoint when and where, lest you should think I have schemed to draw you forth for a Mark.

I am your ready and willing Serv't,
for Christ's sake,

B. PAGE.

The permission which had been given him to preach to those in the Block House was withdrawn as the above letter indicates. The following confirms the fact. It is a note from the officers in the Block House addressed to Mr. Lazr^s. Stewart.

SIR: Our people being all desirous of hearing the gospel preached would have been glad to have had the opportunity—as that is denied, shall be ready to give our women and children the opportunity, and beg you'll keep your men close as you desire the same of ours—you'll communicate this to Mr. Page. We are as usual,

ASHER CLAYTON,
JOS. MORRIS,
JNO. DICK.

The fire from the redoubts upon the Block House was constant from 30th day of July until 14th day of August, with the exception of Sunday, the 11th, the day upon which Mr. Page preached to the besieging party and desired to preach to the other also. The suspension of active hostilities on the 11th was doubtless due in part to Mr. Page's intervention. To the besieged party a minister who could on the one hand give spiritual consolation and advice, and on the other effect a cessation of the galling and continuous

fire of an ever vigilant enemy, was one whose services were greatly to be desired; and we can readily believe that the soldiers of the Block House would gladly forego the privilege of the former for the benefit to be derived from the latter.

"The Mill," mentioned in the letters, was situated on Mill Creek, and was captured by the Yankees upon their approach to the siege of the Block House. It is said by Miner that the first mill was erected in 1773; there is, however, no doubt that there was a mill at the place mentioned in 1771. The Yankees had been on the ground for nearly three years and derived their subsistence in part from the crops they cultivated, and it is hardly to be believed, even though proof was wanting, that they had not provided themselves with so simple and necessary establishment.

Mr. Page's name appears in no lists of settlers nor in the evidence produced before the Pennsylvania Commissioners on titles to the lands. He was in no sense a settler, or claimant. It would seem that the threat expressed in his first letter was not carried into execution, for although he did shake the dust of Wyoming off his feet, he did so only temporarily. After leaving Wyoming he set out for London where he was ordained and licensed by the Lord Bishop, August 24, 1772, and was assigned to the Wyoming parish. He returned to the scene of his former labors, under the auspices of the Society for the Propagation of the Gospel in Foreign Parts, an organization chartered in England in 1701, one of the purposes of which was to send missionaries to itinerate and make personal observation in the American Colonies. The Wyoming parish, to which he was assigned, contained an extensive territory, and much of his time was taken up in the discharge of his mission in parts remote from Wilkes-Barré. Fithian, in his journal (*Historical Register*, II. 106), mentions a Mr. Page, a church clergyman, as having been on the West Branch, in the neighbor-

hood of Muncy, during the month of June, 1775, who was doubtless the same individual.

Bolton, in his History of West Chester county, N. Y., says that on September 18, 1775, the vestry (of St. Peter's Church) voted "to set on foot a subscription towards the support of the Rev. *Bennet* Page during his preaching at St. Peter's church at Peekskill. This individual was probably the Rev. Bernard Page, A. M., who was licensed by the Bishop of London, * * and appointed to Wyoming parish, Pennsylvania, from whence he removed to this Province. Mr. Page does not appear to have officiated here very long; and no doubt left in consequence of the breaking out of the Revolutionary war."

Rev. Dr. William Smith, in a letter dated Philadelphia, October 13, 1773, to the Lord Bishop of London, says of Mr. Page:

* * * "It is with sorrow we are obliged humbly to represent to your Lordship that our church has lately suffered greatly by several unworthy men, who by the recommendations of those who were not deserving the credit they have received, have found means to impose on your Lordship's goodness and have got into Holy Orders, some of whom have come to this place and some have gone to Maryland and Virginia.

Mr. *Illing*, whom your Lordship sent out, is as Dr. Peters represents him, a worthy man, but Mr. *Page* is every way the reverse. The people in general who subscribed and whose subscriptions he laid before your Lordship, believed him to be a Presbyterian, and are chiefly of that persuasion. He never meant to settle among them but only to get into Orders. He knew none of us would recommend him. Nay, he knew that we would write to your Lordship against him, if we had known of his intentions. Despairing ever to obtain recommendations from any of the clergy here, as his conduct has been very exceptionable the short time he was in America, he applied, just before he embarked, for Letters from Father Harding, a worthy Jesuit in this town, to the Bishop of Canada, with a view to get ordained by him, and as he pretended he meant afterwards to recant his Errors and commence Preaching in our church. Harding, who was always on good terms with us, discovered his Duplicity and want

of Principle and refused to have anything to do with him. He then went among those People on our Frontiers, whom I have mentioned. What other recommendations he produced to your Lordship we have not heard. He never went near the people on Susquehannah, but on his arrival immediately set up as a separate Preacher in New York without any Regard to Order or the Establishment there." (Life of the Rev. Wm. Smith, D. D., Vol. I. p. 84.)

Bishop Perry, in his Collections, referring to this letter, says in a note: "The Rev. Bernard Page, licensed to Wyoming parish, the same year removed to Virginia." Bishop Meade, in his Old Churches, Ministers, and Families of Virginia, refers to him several times. Bishop Meade was once Rector of the historic Christ Church, of Alexandria, Va., of which Rev. Bryan Fairfax, 8th Lord Fairfax, was Rector in 1780. He says, "There was associated with Mr. Fairfax the Rev. Mr. Page, who afterwards moved to Shepherdstown, and of whom I have heard that venerable old lady, Mrs. Shepherd, speak in the highest terms as an evangelical man of the School of Whitfield"—(I., 32). In speaking of Lancaster county and its churches he says: "In 1791 the Rev. David Ball appears for one year in the list of our clerical delegates * * He was followed by a Rev. Mr. Leland and a Rev. Mr. Page, each for a short time"—(II., 124). Under head of Norborne parish, Berkely county: "In the year 1795 the Rev. Bernard Page was minister; of him I have often heard old Mrs. Shepherd speak as one of the evangelical school, deeply pious, zealous, and far beyond the ministerial standard of that day. He had been previously an assistant minister to the Rev. Bryan Fairfax in Christ church, Alexandria. From Shepherdstown he went to the lower part of Virginia, but soon died from the effects of the climate. Mr. Page was succeeded by the Rev. Mr. Heath who was minister in 1800, and died in the parish"—(II., 297).

The Rev. Randolph McKim, D. D., Rector of Christ church, 1867-1875, who, in his Centennial sermon, carefully

preserves so many early events and traditions of this venerable parish, in speaking of Rev. Mr. Fairfax, says: "Nothing has come down to us concerning his preaching; but that his sentiments were evangelical is evinced by his selecting such a man as Rev. Bernard Page to be his assistant."

Through the courtesy of the Rev. H. Suter, D. D., of Alexandria, Va., present Rector of Christ church, I am enabled to give the following extract from the church records relating to Mr. Page. It is dated October 1, 1792, the Rev. Mr. Fairfax being Rector: "Resolved, that as it is agreeable to the Reverend Mr. Thomas Davis, Minister of the parish, the Vestry Grants leave to the Reverned Mr. Bernard Page to preach at the two Churches in Fairfax parish on any Day when they are not occupied by the Minister himself. And that such Subscriptions as the people Choose to make the Rev'd Bernard Page, the Vestry disclaims any authority in Collecting or applying." Mr. Page was assistant while General Washington was a pew holder and an attendant in the services of this church.

Much confusion arises regarding the movements of Mr. Page after his return from London, and it is not easy to reconcile the conflicting statements. Dr. Smith insists that he never went to Wyoming after his return, but that he remained in New York. As his letter bears date 1773, a few months after the arrival of Mr. Page in America, it is probably true he did preach a short time in New York before setting out to the parish to which he had been assigned; but it is equally true that he afterwards repaired to Wyoming, as the Rev. Mr. Fithian met him in that region in June 1775. From there he went to Peekskill where he preached at St. Peter's church, and subsequently removed to Virginia and there spent the rest of his life in his chosen work.

Concerning the evangelical character of Mr. Page, the opinions of his contemporaries widely differ. Dr. Smith's

estimate as expressed in his letter is very positive, not to say bitter, and must have caused the Lord Bishop some misgivings. On the other hand the testimony recorded by Bishop Meade shows his character in quite another light: "deeply pious, zealous, and far beyond the ministerial standard of that day." The letters of Mr. Page to the "Parties who contend for Wyoming" may in fairness be cited in corroboration of the latter opinion. No one can question the zeal of a man who should undertake the mission with which Mr. Page had charged himself, knowing the difficulties of the position, and the many hardships and dangers certain to beset his way; nor is there any reason to doubt the integrity of his purpose or the pious benevolence of his intentions. It may be remarked that the relations of both Mr. Page and Dr. Smith to Wyoming were quite intimate though of somewhat different nature. Mr. Page says: "I am come to preach the glad tidings of eternal salvation * * I desire to have nothing to do with your secular affairs." Dr. Smith's purpose, to use the words of his letter as applied to Mr. Page, was "every way the reverse." Dr. Smith acquired the Pennsylvania title to numerous tracts of land in the Seventeen Townships which he continued to hold and defend in common with others holding like titles, until October 1799, when he conveyed and released them to the Commonwealth of Pennsylvania, under the provisions of the Act of April 4, 1799.

VARIOUS SILVER AND COPPER MEDALS

PRESENTED TO THE AMERICAN INDIANS BY THE SOVEREIGNS OF ENGLAND, FRANCE, AND SPAIN, FROM 1600 TO 1800, AND ESPECIALLY OF FIVE SUCH MEDALS OF GEORGE I., OF GREAT BRITAIN, NOW IN THE POSSESSION OF THIS SOCIETY AND ITS MEMBERS.

[Read before the Society, September 12, 1884, by Rev. Horace Edwin Hayden.]

To the President and Members :

This paper is the result of the discovery that five such medals exist in our valley. One in the possession of the Wyoming Historical and Geological Society; one in the possession of Master Denison Stearns; one in the cabinet of Hon. Steuben Jenkins, of Wyoming, and two belonging to my own numismatic cabinet.

I have long had in mind the preparation of an exhaustive paper on the subject of the medals which the various nations of Europe, whose colonies have existed on American soil, have issued to the North American Indians since 1600. But the difficulty of gaining access to the needed authorities, has so far deterred me. I take occasion, however, in treating upon the special subject of this paper, to present to this Society such historical and medallic data as I have been able to discover in my own library.

The continent of America was discovered by the Cabots, under English auspices, in 1497, five years after the discovery, by Columbus, of the West Indies.

In 1512 the Spanish flag floated over the soil of Florida.

In 1534 the French flag was planted on the shores of the Gulf of St. Lawrence.

Thus, in less than forty years, three of the great powers of Europe began their struggle for the supremacy in this New World.

In 1578 and 1584 Elizabeth granted a patent to Sir Humphrey Gilbert and Sir Walter Raleigh. The first took possession of Newfoundland, and the second of Virginia, within one year of each other, with the purpose of forming permanent settlements.

It was not until 1603 that France conferred similar privileges on any of her subjects; then she granted Acadia to de Monti.

These events may appear to be anything but pertinent to the matter under consideration; and yet, out of these distant beginnings grew the medals whose history I desire to record. Parkman, in his charming volumes on the early American colonies, shows how those of "France and England grew up to maturity under widely different auspices." The one, nursed and petted by the royal government, became enervated, and languished; the other, neglected and outcast, grew as a giant from the very necessities of the case.

But France and Rome were one. The religious element which the Romish church fostered and controlled in the French, made the colonists aggressive for the cross, rather than for the crown. Their Romish priests, "burning with zeal to make new conquests for the church, penetrated the deserts of the New World and braved death in a thousand forms to baptize a child; glad to die a martyr's death if one soul could be thereby gained to the church by this nominal conversion." "The zealous fathers reckoned the number of conversions by the number of baptisms, and, as Le Clercq observes, with no less truth than candor, 'an Indian would be baptized ten times a day for a pint of brandy or a pound of tobacco.'" But the result of all this was a closer relation with the Indian tribes of America and a rapid growth of commercial intercourse between the Indians and French traders, who always followed the track of the Jesuits.

Thus the commercial and political influence over the

Indian tribes belonged almost entirely to the French colonies. Conscious of her power, France was anxious to increase it, as she witnessed the growth of the English colonies in number and prosperity. She foresaw the future struggles between the two nations for existence on the American continent, and did all she could to weaken the Indian faith in English honor and increase her own power over these heathen tribes. England, jealous of France, made similar efforts to secure the friendship of those tribes which surrounded her settlements. The Indian always was a babe in knowledge, and as much charmed by a string of glass beads as a child is with a new toy; and this susceptibility was appealed to, by both France and England, in annual presents of trinkets, and gaudy cloths, &c., to the various tribes, in order to strengthen their attachment. The agents of each nation vied with each other in purchasing treaties of alliance with their savage neighbors. Treacherous by nature, as well as by habit, so great was the instability of these allies that constant vigilance was necessary by each nation to keep their savage friends faithful to their contracts. Every means was used to make the Indian realize his obligation to the nation with which he had made treaties. England early set the example of delighting the vanity of the savage and binding him to her support by hanging around his neck medallic trinkets. On the principle that he is our master whose livery we wear, she decked such Indian chiefs as she desired to conciliate and win to her allegiance, with insignia of her power, in brilliant silver. Such a badge raised the chief greatly in the estimation of his own tribe, and made him the envy of his compeers.

I cannot ascertain at what period the French began to reward their Indian neighbors and allies with similar medallic honors. But they were not behind the English in this means of binding the uncertain element which surrounded their settlements. That tendency of human

nature which our Constitution recognizes when it forbids citizens who hold office under the government receiving any present, reward, or title from any foreign power, belonged as much to the red man as to the white. He seemed to know instinctively that wearing the royal honors of a foreign power was virtually paying tribute and acknowledging allegiance to that power. But it is evident that the Indian thought his allegiance was limited simply to the time during which he permitted that silver disc to lie on his breast, and that when he parted with it or lost it, his allegiance was ended. French and English alike played fast and loose with them in this matter. Whenever either nation made treaties with the Indians, and especially those tribes that had formerly been under the influence of any other foreign power, one of the first demands made of the tribes was the surrender of all medals given by, or bearing the insignia of, any other king or nationality. Thus also when the United States purchased the Northwest Territory from France, Lieutenant Pike, of the United States Army, was at once sent up the Great River to proclaim the authority of the United States, which he did, partly in demanding the surrender of all foreign medals in the possession of the Indian tribes, and by exacting from the British and French agents a promise that they would henceforth make no more such presentations.

A similar precautionary movement was made during the late war between the states. Fearing the interposition of the English government, in recognizing and aiding the Confederate States of America, the United States Indian agents were ordered to search among the Indian tribes for foreign medals, demand their surrender, and give American medals in their stead. One of these medals thus obtained from Menomonee chiefs, at this time, is preserved in the Wisconsin Historical Society (*Wis. His. Col.*, vol. IX., p. 124). A second copy exists in the collection of the United States mint.

The first medal having any reference to the American Indian, of which I have found any account, is that of the "Pamunkey Indian medal."

Captain John Smith, in his History of Virginia, for which part of America he set sail in 1603, says : " Foureteene miles Northward from the river Powhatan is the river Pamavnkee, which is navigable 60 or 70 myles. * * * At the ordinary flowing of the salt water, it divideth it selfe into two gallant branches. * * * Where this river is divided the Country is called Pamavnkee, and nourisheth neare 300 able men." (*Vol. I., p. 117.*)

Again he says : " The fourth river is called Patawomeke, 6 or 7 myles in breadth. * * * It is inhabited on both sides. First, on the South side, at the very entrance, is Wighcocomoco, and hath some 130 men, &c., and the Patawomekes more than 200." (*Vol. I., p. 118.*)

It was the King of Pamunkey whom Captain Smith took prisoner in 1608.

In the course of time these various Indian tribes that lay near the Jamestown settlement became as the Philistines to Israel, " a thorn in the flesh," and frequent collisions took place between them and the colonists.

In 1622, after the great massacre by the Indians, in which 347 colonists were slain, a general effort was made to exterminate the savages, an expedition being sent against the Pamunkies, with the others. These continual conflicts, while they did *not* exterminate, greatly reduced the number of the aborigines. In 1700 Beverly estimates that "in Prince William's county Pamunkie has about thirty bowmen, who decrease."

There is in the possession of Dr. M. P. Scott, of Baltimore, Maryland, a silver shield, oblong in shape, and varying from four to six inches in diameter, the centre being a slightly convex disc, bearing on its outer rim the inscription : " *Charles II., King of England, Scotland, France, Ire-*

land, and Virginia." Within this legend are the four quarterings of the royal house, the lion, the *fleur de lis*, the thistle, and the harp; while in one corner there is a figure supposed to be the tobacco plant, representing Virginia. The quarterings are surrounded by the garter, and the legend, "*Honi Soit*," etc. Below the central disc is an oblong surface with the inscription, "*The Queen of Pamunkie.*" Above the disc is the figure of the crown of Great Britain. Attached to the back are five rings, to be used in fastening the medal. This medal was bought from the Indians at Fredericksburg, and is said to be in very fine order.

A somewhat similar medal was presented to the Virginia Historical Society in 1835, bearing the legend, "*Ye King of Pamunkie,*" and is described as "a badge which the laws of the colony of Virginia at one time compelled the Indians to wear when they came within the limits of the white man's settlements." The reason of which is thus set forth in the Act itself, viz.:

"And because an intervall betweene the Indians and English cannot in the present nearnesse of seating be soe laid out as may wholly secure the English from the Indians comeing and pilfering, &c." (*Hening's Stat., vol. II., p. 141.*)

Mr. R. A. Brock, the learned Secretary of the Virginia Historical Society, reports a tracing of a third medal, once the property of the Society, and described as of an irregular oval form, bearing the inscription, "*Ye King of—*" on the *obverse* side of the planchet, and "*Patomeck,*" on the *reverse*. On the *obverse* is a representation of a tobacco plant. These medals were doubtless all given by the crown as tokens of amity and a seal of allegiance.

The earliest official record that I have been able to discover of the issue of medals to the Indian tribes of America, is found in the "Propositions made by His Excellency, Robert Hunter, Captain General and Governor of New

York, to the Sachem of the Five Nations," Albany, August 16, 1710, during the reign of Queen Anne. In his address Governor Hunter says:

"Your brethren who have been in England, and have seen the great queen and her court, have no doubt informed you how vain and groundless the French boasting has been all along; how our great Queen's Armies have year after Year routed all his forces, taken his Townes, and is at this time near his principal town and seat of Government. Her Majesty has sent them, as a pledge of *her* protection and as a memorial to them of *their* fidelity, a *medall* for each nation, with her Royal Effigies on one side, and the last gained battle on the other, which, as such, she desires may be kept in your respective Castles forever. She has also sent her Picture in *silver*, twenty to each nation, to be given to the Chief warriors to be worn about their necks as a token that they should always be in readiness to fight under her Banner against the Common Enemy." (*Col. His. N. Y., vol. V., p. 222.*)

To this address the sachems of the Five Nations made this reply, which bears marks of having been written by the agent who delivered the proposition of the governor:

"The Great Queen of England has been pleased, as a pledge of her Protection, to send each of our nation a Medall, with her royal Effigies on the one side and ye last gained battle on the other, which we have received with all the satisfaction Imaginable, and will keep them ever in our castles, and bring the same down when any public and solemn Conferences are to be held, to show the same. We are also very thankful for the 20 pieces of silver she has been pleased to send to each nation, with her picture upon them, which our chief captains shall wear about their necks, and shall always be ready to fight under her banner against the common enemy." (*Col. His. N. Y., vol. V., p. 224.*)

I can find no mention of these medals in any volume on

the subject of numismatics. I judge the silver pieces, with the Queen's effigy upon them, to have been Queen Anne crown pieces. The coins of this queen were executed with remarkable skill.

The medals were, I judge, from the language of Governor Hunter, commemorative of the last victory of the English over European enemies. They were doubtless the silver medals struck in memory of the capture of Tournay, in 1709, with Queen Anne's bust on the *obverse*, and on the *reverse*, Pallas, seated, holding a shield and a mural crown on a spear; size, 25-16. It will be seen at once that these were not what may properly be called Indian peace medals, because no reference to the Indians occurs on the pieces.

George I. succeeded Queen Anne, 1714. Meanwhile France, led into intimate intercourse with, and knowledge of, the Indians, through the Jesuit fathers and the Canadian fur-traders, was quietly stretching out her arm and grasping all the territory that lay south of the lakes and establishing military posts at various points, contrary to the treaty of Utrecht, in which she agreed not to invade the lands of the Indian allies of Great Britain.

About 1716 Governor Spottswood, of Virginia, made his expedition to the trans-montane region of Virginia, and organized his famous "Knights of the Golden Horseshoe." On this expedition he discovered the military occupations of France, and advised the English government, wisely suggesting that a chain of forts be built across to the Ohio, and that settlements be formed here and there, to prevent the encroachments of France. To this advice the Crown paid no attention, nor did it awake to the necessity of adopting the wise plan of the Governor until nearly a half century later.

Meanwhile England and her Indian allies were peaceably pursuing the even tenor of their ways. Possibly this state of affairs may account for the fact that the medals which

George I. presented to the Indians were made of base metal, instead of silver; and from the device upon the *reverse* side, I judge they were not given as peace medals so much as rewards for faithful services.

The Indian medals of George I. are the first that bear any especial reference to the peculiar life and pursuits of the Indians. Each of the four medals which I here present for your examination, contains on the *obverse* the bust of George I., and on the *reverse*, the device of an Indian hunting the deer. Two of these medals have a historic connection that is interesting. Those which belong to my own cabinet were discovered about 1858, in the bank of the Ohio river, at Point Pleasant, West Virginia, on the spot where the bloody and stubborn battle of Point Pleasant was fought, in 1774, between the colonists, under General Andrew Lewis, and the combined Indian tribes, under Logan, Cornstalk, and Outacité; a battle which began one-half an hour before sunrise, October 10, 1774, and continued, almost without cessation, until sunset the same day. It is more than probable that these two medals were worn by Indian chiefs on that day, and were lost in the conflict or in the flight. They were presented to me by the late Dr. Samuel Glover Shaw, of Point Pleasant, from his very rich collection of pre-historic and Indian remains. In describing these five medals, I will begin with that one belonging to the Society:

1. WYOMING MEDAL.—*Obverse*, Military bust of George I., draped and laureated, facing right. Legend “*George King of Great Britain.*” The bust of the king is 20-16 in length and 16-16 across the shoulders. *Reverse*, Under a tree to the left stands a deer on a hill. To the right, at the foot of the hill, stands an Indian, with a bow drawn, and in the act of shooting the deer; over all, the sun with his rays. Thin planchet. Copper. Looped. Size 25-16.

This medal was included in the Collection of Coins, Medals, Minerals, &c., of Harmon A. Chambers, Carbon-dale, Pa., which was purchased and presented to the Wyoming Historical and Geological Society in 1858, thus forming the nucleus of the valuable collections now owned by this Society. The medal is described in Mr. Chambers' catalogue as "one of the medals presented by George I. to the Chiefs of the Six Nations in 1716." (p. 11).

As there was no conference with the Indians by any of the colonies of Great Britain in 1716, Mr. Chambers' conclusions are merely conjectural. It may have been presented at the conference of the Governor of New York and the Six Nations in 1715 or 1717, but in the very full account of those conferences no reference whatever is made to this or any other medal. Where Mr. C. procured this medal and what its local history, I cannot ascertain; but the above account of it disposes of the impression which somehow has prevailed, that it was the copy referred to by Mr. Miner, or had been received by this Society from the Historical Society of Pennsylvania.

2. POINT PLEASANT MEDAL.—*Obverse*, Military bust of George I., draped and laureated, facing right, and 2-16 larger than the head of No. 1. Legend the same as No. 1, "*George King of Great Britain.*" *Reverse*, Same as No. 1, except that the hill is higher, the tree shorter and the Indian larger. Planchet 1-16 thick. Brass. Looped. Size 26.
3. POINT PLEASANT MEDAL.—*Obverse*, Military bust of George I., facing left, and laureated. Legend *Georgius*, —*Mag. Br. Fra. et Hit. Rex.* *Reverse*, Under a tree to the right, which follows the curve of the planchet, an Indian is standing in the posture of one about to run. He holds in his hand a bow from which the arrow has just been discharged. To the left, under a second tree

which follows the left curve of the planchet, is a deer running at full speed. Between the Indian and the deer stands a bush at the foot of which lies what appears to be a dead deer. There is no sun on the medal. Planchet very thin. Brass. Looped. Size 16.

4. STEARNS MEDAL.—*Obverse* and *Reverse* the same as No. 2. Copper. Looped. Size 26.

The only copy of this George I. medal that I have discovered in sale catalogues of coins is No. 2183 of the Jewett sale, January, 1876, placed among *Bronze Medals*. Hence, supposed to be a copy of No. 2. It brought \$6.00.

One of these medals was sold in the Bushnell sale, June, 1882. No. 255.

5. JENKINS MEDAL.—*Obverse*, Military bust of George I., 12-16 across the shoulders, and 13-16 in length, while the others are 18-16 and 21-16. The hair does not fall over the back in a queue but is confined closely by the fillet, which is composed of 12 leaves, and is much smaller than the others. The legend, "*George King of Great Britain*," extends over $\frac{1}{8}$ of the circumference, while in the other it is only about $\frac{5}{8}$. *Reverse*, The sun; a very large Indian to the right throwing a javelin at a very small deer, which stands to the left at an angle of 40° from the Indian. Copper. Very thick. Size 24.

This medal, now in the possession of Hon. Steuben Jenkins of Wyoming, Pa., was found on the banks of the Susquehanna at Sunbury, by Mr. J. H. Jenkins.

A copy of No. 2 is known to be in the Historical Society of Pennsylvania. It is described in Miner's History of Wyoming, p. 27, and is represented there by an engraving. It will be recognized as a duplicate of No. 2. Mr. Miner gives this account of its discovery. After a general description of the remains of ancient fortifications in the Wyoming Valley, he refers to one "on Jacobs' Plains, or the

upper flats in Wilkes-Barré;" gives a detailed account of its appearance, and continues, "in 1814 I visited this fortification in company with the present Chief Justice Gibson and Jacob Cist, Esq. The whole line, although it had been ploughed for more than thirty years, was then distinctly traceable by the eye. Fortune was unexpectedly propitious to our search, for we found a medal bearing on one side the impress of King George the First, dated 1714 (the year he commenced his reign), on the other an Indian Chief. It was awarded to Mr. Cist, as the most curious and careful in such matters, and by him was deposited with the Philadelphia Historical Society." Mr. Miner adds, in a note, "Should it not be placed with the Indian relics in a museum to be formed in Wilkes-Barré?" I courteously commend this suggestion to the Historical Society of Pennsylvania. I think Mr. Miner must be in error as to the date, as none appears on the engraving of the medal, and none appears on any of the four medals just described.

I have stated that this medal described by Mr. Miner is a duplicate of No. 2, but if the engraving given in Miner is an *exact* counterpart of the medal, it should be classified as a variety of No. 2—from a different die. In the engraving four stars appear near the sun, and a forest of trees in the distance beyond the Indian and the deer. It is possible that these additional figures were also struck on the medals just described, but if so, they have disappeared, as the medals are all much worn and corroded. Other copies of this medal have been discovered in the State of Pennsylvania, but I have had no time to ascertain their present whereabouts.

In 1835 *The Columbia Spy* contained the following item: "A brass medal has been left at this office, which, together with several articles and a human skull, were dug up a few days since in Wrightsville, York county, Penn'a. It bears on one side a head, with the inscription, "George King of

Great Britain," and on the other an Indian with his bow and arrow in the act of shooting a deer. It appears to be worn as an ornament in the nose or ears. There were found also two others of similar description—a brass kettle—a string of white beads, one and a half yards in length—some red paint and twenty-five rings, one of which was dated 1716." *Haz. Ann.* xv. 336.

Pursuing this subject chronologically I find a medal of Louis XIV. of France, mentioned as having been presented to the Canadian Indians during the early years of the eighteenth century. It is very doubtful, however, if it was struck with any reference whatever to the Indians. It presents on the *Obverse* the head of Louis XIV., with the usual Legend, "*Ludovicus XIV. D. G. Fr. et Nav. Rex.*" *Reverse*, the bust of the Dauphin, and under that the busts of the Dukes of Burgundy, of Anjou, and of Berry, the three children of the Dauphin. Under each bust is the respective name and title. Surrounding them is the legend, "*Felicitas Domus Augustae;*" and in exergue is the date "1693." This medal was supposed to be one of the regular series of Louis XIV., and again it is said to have been struck to commemorate the birth of the Duke of Berry. However, it was used by the French as a reward to the Indians, who cared very little what occasion called it into existence. It is of silver, with a ring attached, and was found in the possession of an old Indian family of the Huron tribe near Quebec. Mons. Rhaume, Curator of the Numismatic Museum, Quebec, asserts that it was "a medal of reward granted to the Indian chiefs by the king, for bravery, just as these large silver medals were given by George II. and George III. The historical medal bears only the name and birth of the Duke of Berry, 1686, while this contains the name of each son and the date 1693. I do not know of another copy existing." Mons. Rhaume's statement is supported by a letter from Mother Mary, of St. Helena, dated

Quebec, October 17, 1725, who, after mentioning the Indians, says: "Louis XIV., had sent silver medals of considerable size, on one side of which was his portrait, and on the other that of the Dauphin, his son, and that of the three princes, children of the latter, to be given to those who should distinguish themselves in war. To them has since been attached a flame colored ribbon, four fingers in breadth, and the whole decoration is highly prized among them. When a chief dies he is honorably buried, a detachment of troops parade, several volumes of musketry are fired over his grave, and on his coffin are laid a sword crossed with its scabbard, and the medal under consideration fastened upon them." (*Am. Jour. Num. XI. 93.*) These medals are so extremely rare that I judge very few were presented to the Indians, or else, as Mr. Rhaume suggests, the English destroyed them after the conquest of Canada.

A letter is extant in the archives of Paris, written by Governor Vaudreuil, of Canada, under date of September 21, 1722, in which he says: "I have received the letter with which the Council has honored me and the twelve medals bearing the portrait of the king, eight small and four large ones. I have continued to be careful not to be too lavish with this favor among the Indians, and to give them only to those who by their services to the nation deserve them, and to those whom I desire to bind to our interest by this mark of honor."

In 1727, August 22, M. Beauharnais, the natural son of Louis XIV., and made Governor of Canada by Louis XV., wrote as follows: "Since the death of Mr. Vaudreuil, the Rev. Father Jesuits have not asked medals for the chiefs of the settled Indians for whom it was customary for them to ask some. The Rev. Father de la Chasse, to whom the Marquis de Vaudreuil had given one, tells me it is absolutely necessary to provide some more. I have received proof of this. The Indians from above, when they come down to

Montreal, would not relieve me from promising them to several who have served us well among their tribes. I pray you to enable me to satisfy these savages and to send me a dozen small medals and six large ones. If this number is not sufficient for the year, I shall have the honour to ask some next year, but I shall take good care to cause them to be valued and to give them only to those who shall deserve them on account of real services."—(*Am. Jour. Num.*, *Mr. R. W. McLachlan*, XVIII., 84.)

In 1737 M. Beauharnais wrote to the Count de Maurepas, one of the French Cabinet, as follows :

OCTOBER 15, 1732.

I thank you, my Lord, for the twelve medals you had the goodness to send me for the Indians. His Majesty may be assured that I will make the most of them and that I shall not distribute them except to Chiefs where services and attachment to the French will be known to me. As there are many such to whom I have promised such a token of honour, and as the adventures of our Iroquois and Hurons against the Foxes, places me under the obligation of giving a few to the principal Chiefs of the Expedition, I beg you, my Lord, that some be sent me next year, so that I may be enabled to invest them with this mark of honour, which also renders them more respectable among their people."—(*N. Y. Col. Rec.*, IX., 1036.)

The Marquis Duquesne, Governor of Canada, writes thus to M. Machault, Minister of the Colonies :

QUEBEC, 13 8ber 1754.

"Abbe Piquet's mission, reported by our domesticated Indians to be made up of spies of the Five Nations, has just given the strongest proof of attachment and fidelity by sending me the medal the English had presented to some of that village who had furtively assisted at the Council at Orange,

and they have expelled one of the brethren who was suspected of having an English heart."—(X., 262.)

December 20, 1756, at a conference between M. de Vaudville, Governor General of Canada, and the Indian deputies of the Eight Nations, two English medals were surrendered. At which time Kouee, an Oneida Chief, said:

"Father, we cannot retain two medals which we have formerly had the folly to accept, from our brethren, the English, as a mark of distinction. We acknowledge that these Medals have been the true cause of our error and that they have plunged us into bad business. We strip ourselves of them. We cast them from us in order not to think any more of the English."

Parkman, in his fascinating volume on Montcalm and Wolfe, describes a medal worn by one of the Abenakis of St. Francis, as seen by Roubaud the Jesuit Missionary, as having "the king's portrait on one side, and on the other Mars and Bellona joining hands, with the device "*Virtus et Honor.*"—II., 480. This was not an Indian medal, but one of the many bronze medals of Louis XV., struck to commemorate home events.

What medals for distribution amongst the Indians were struck during the reign of George II., of England, 1727-1751, I have not been able to learn. During the reign of George III. a variety appeared. Dr. E. B. O'Collaghan, whose name is a sufficient guarantee of the correctness of his statements, sent the following note in 1865 to the Historical Magazine, in which it appeared, September, 1865.—*Series I., Vol. IX., 285.*

"Sir Danvers Osborne, after he had been appointed Governor of New York in 1753, brought out among other presents for the Six Nations thirty silver medals; his Majesty's picture on one side, and the Royal Arms on the other, with

silver loop and ring, in shagreen cases, with a yard of the best broad scarlet watered ribbon, silver hooks and eyes. Though these medals seem to have disappeared, possibly a stray one may be found in some collection.—*E. B. O.*"

I take it that this is the medal described by Sandham in his "Supplement to the Coins of Canada, No. 59." He gives three sizes, 48-16, 25-16, and 38-16, and describes it thus:

Obverse, Bust of George III., in armor. "Georgius III. Dei Gratia." *Reverse*, Royal Arms. No date. Size 48. A copy of this medal was sold in the Jewett Collection, January, 1876, for \$24.00, and is described there thus:

"No. 1141, Indian medal (silver). *Obverse*, Bust of George III. Young head. *Reverse*, Arms of England. Size 48."

The following note is added: "This medal was struck for distribution to the Indian chiefs, and the present one was obtained from the grandson of 'Noon Day,' an Ottawa Chief."

In the American Journal of Numismatics, XII., 48, will be found an article on "An Old Indian Medal," issued 1757, during the reign of George III., by a society in Philadelphia called the "Friendly Association for Regaining and Preserving Peace with the Indians by Pacific Means." In Vaux' life of Anthony Benezet an engraving of this medal is to be seen, and the following description of it: *Obverse*, The Head of George III. to the left, and the inscription, "Georgius III. Dei Gratia." *Reverse*, An Indian and a European seated at a Council Fire, the latter pointing with the Calumet, or pipe of peace, towards the sun, near the zenith. This device is surrounded by the legend, "Let us look to the Most High, who blessed our Fathers with Peace." Mr. Vaux says this medal was the *first* attempt in that department of fine arts in Pennsylvania. Size 28. Bronze. Of this medal No. 2186 Jewett sale, January, 1876, brought \$1.50. A copy brought in the Nixsen sale, October, 1871, \$3.00. One in the Cleveland sale, May, 1872, \$3.25. Three

were sold in the Bushnell sale, June, 1882, one of which was in Tin, size $27\frac{1}{2}$, one in Silver, and one in Bronze, each size 28. Another was sold also in the Sampson sale, February, 1884, but the prices of these last have not been learned.

In the Cogan sale, December 20, 1877, a medal was sold, which I take to be the Philadelphia medal, described however on the Reverse as "Wm. Penn offering the pipe of peace to the Indian."

During the reign of George III. a curious Indian medal appeared, an engraving of which is before me in Sandham's Supplement to the Canadian Coinage. Mr. McLachlan, in the very interesting paper referred to above, treats of it at length. A copy was sold in the Bushnell sale, June 20, 1882, No. 286, for \$29.00, purchased by Mr. McLachlan, and is thus described by Mr. Sandham, Supplement, No. 75: *Obverse*, View of Montreal in 1760, with fortifications. "Montreal." In exergue in an oval depression the letters, "D. C. F." *Reverse*, At top, engraved, "Tankalkel." In centre in Roman letters "Mohigeans." Size 29. Looped. Silver.

A copy of the same medal sold with the collection of I. F. Wood, May, 1873, for \$18.00, but it was struck in white metal.—(Wood, No. 1169.)

Mr. McLachlan thinks this is the medal referred to by Sir Wm. Johnson, Bt., in his diary under date of July 21, 1761, *vide* Stone's Johnson, II. 435, where he says: "Got everything on board the vessel (for Niagara), there met the Onondaga and other chiefs. When assembled I bid them welcome, &c., &c. Then delivered the medal sent me by the General for those who went with us to Canada last year, being twenty-three in number." Colonel Stone says, (II, 144), "these medals, by order of Amherst, were stamped upon one side with the Baronet's Coat of Arms."—(McLachlan. *American Journal Numismatics*, XVIII., 84-87.)

Mr. McL. refers in his paper to an excessively rare medal

of 1764, which has on the *Obverse* the head of George III., and on the *Reverse*, a white man and an Indian seated under a tree on the sea shore, surrounded by the legend, "*Happy while United.*" Of this medal I have never heard before.

Professor James D. Butler, L.L. D., of the Wisconsin Historical Society, in a valuable paper on the Early Historic Relics of the Northwest (*Collection Wisconsin Historical Society, IX., 125*), presents a copy of a document now in the possession of the Historical Society, which is printed in English and French, and which is as follows:

"Frederick Haldimand, Captain General and Governor in Chief of the Province of Quebec, &c., &c., &c., General and Commander in Chief of his Majesty's forces in said Province and frontiers, &c. To Chawanon, Grand Chief of the Folles Avoines (*Menomonees*). [Red Seal.]

In consideration of the fidelity, zeal and attachment testified by *Chowanon*, *Grand Chief of the Folles Avoines* to the King's Government, and by virtue of the power and authority in me vested, I do hereby confirm the said *Chawanon*, *Grand Chief of the Folles Avoines*, aforesaid, having bestowed upon him the *Great Medal*, willing, all and singular, the Indians, inhabitants thereof, to obey him, as *Grand Chief*, and all officers and others in His Majesty's service to treat him accordingly. Given under my hand and seal at arms at Montreal, this *seventeenth* day of *August*, one thousand seven hundred and seventy-eight, in the *eighteenth* year of the reign of our sovereign Lord George III., by the Grace of God, of Great Britain, France and Ireland, King, Defender of the Faith, &c.

FREDERICK HALDIMAND."

This document is a printed form with blanks for names and dates to be filled up as occasion required, and in size 8x12 inches, with a red seal. The word *Medal* is also printed. No medal accompanies the document, so that we are left to conjecture what its design may have been. It

may have been simply some of the regular historical medals of Great Britain struck in connection with its Canadian history.

I have but one other medal of this character to notice. Professor Butler, in the paper above referred to, gives an account of a Spanish-Indian medal, discovered at Prairie du Chien, about 1864, and now the property of the Wisconsin Historical Society. Its description is as follows:

Obverse, A bust 24-16 in height, clearly stamped. Surrounded by the legend, "*Carlos III., Rey D'Espana, e de Las Indias*"—"Charles III., King of Spain and the Indies." *Reverse*, Within a wreath of Cactii, which is tied with ribbons, the words, "*por merito*," the word "merito" covering more than 17-16. Size 36; silver, weighing 776 grains.

Professor Butler thinks this medal was presented to Huisconsin, a Mitasse chief of the Sauks and Foxes, November 20, 1781, by Don Francisco Cruzat, the Spanish Governor.

I notice, in the personal Narrative of Captain Thomas G. Anderson, who was active under the English in the capture of Prairie du Chien, during the war of 1812, the following record :

"Some of the Indians in this quarter had been induced by exaggerated stories from the enemy to surrender the Royal George medals which they had received as tokens of friendship from General Haldimand, Lord Dorchester, and other prominent commanders in the early days of Quebec, for those of the American eagle. However, they soon returned to their old flag." (*Wis. His. Soc. Col.*, vol. *IX.*, p. 196.)

This medal has the Royal Arms on the *Reverse*, with the Lion Supporters.

I have examined over 200 coin catalogues in my library, covering a period of thirty years, with reference to the medals which I have just been describing, with the foregoing

result. It might have been richer if time for more complete examination had been plentiful, as I am sure the subject has not been exhausted.

It may not be generally known that it has been the custom, during each presidential term of the United States, since the election of George Washington, for the United States mint at Philadelphia to issue silver and bronze medals for distribution to the chiefs of the Indian tribes. These medals, usually round or oval, bear on the *obverse* the bust of the president of the United States, with his name and title of office; on the *reverse*, some device, such as the President offering his hand to an Indian; or two hands clasped; calumet and tomahawk; or Indian and farmer. A full set of these, in bronze, can be found in the Bushnell sale (pp. 79-105), one or more under each presidential name. Their history and description would make a very interesting paper.

The medal which appears on all the portraits of Red Jacket is one of this series, it having been prepared by order of President Washington, for presentation to that famous Indian orator. I am not satisfied that this is the only one of the Washington Indian medals that was issued.

The value of these presidential medals may be learned by the description of several in Cogan's sale of November, 1877, all silver:

971. MILLARD FILLMORE MEDAL, 1850.—Size 41; weight, in silver, \$4.25. Sold for \$5.50.
972. JAMES K. POLK MEDAL, 1845.—Size 33; weight \$2.33. Brought \$2.75.
973. ZACHARY TAYLOR MEDAL.—Size 33; weight \$2.33. Brought \$3.50.
974. ABRAHAM LINCOLN MEDAL.—Size 48; weight \$6.53. Brought \$13.00.
976. ANDREW JOHNSON MEDAL.—Size 48; weight \$6.58. Brought \$6.25.

I am sorry, indeed, that I have no fuller account of so interesting a branch of American Numismatics, and American Indian History, than that which I have just presented to you ; but having drawn these facts from my own private library exclusively, we may judge how much more might have been written with larger resources at hand.

REPORT ON SOME FOSSILS FROM THE LOWER
COAL MEASURES NEAR WILKES-BARRE,
LUZERNE COUNTY, PENNSYLVANIA. By
PROF. E. W. CLAYPOLE.

[Read before the Society December 12, 1884.]

This collection consists of specimens picked out from the shelves of the museum of the Wyoming Historical and Geological Society of Wilkes-Barré. They are for the most part badly crushed and broken, some of them being mere fragments whose recognition is almost impossible. Those among them which are in the best condition, or those which present some characteristic feature or features, I have referred to the species to which the evidence leads me to think they belong. I wish however to make it distinctly understood that in many cases some measure of doubt remains in regard to the identification which can only be removed by obtaining better specimens.

It will be seen that the species referred to in this list belong to widely separated geographical districts and to geological horizons differing to a considerable extent. There is nothing however in these facts that should cause us any surprise. Species, so called, are not absolutely limited by these artificial divisions. Many of them range through several geological formations and over great part of the known world. The well-known *Atrypa reticularis*, for example, is found under some form or other from the base of the Upper Silurian to the top of the Devonian (except in the Oriskany sandstone) and on both sides of the Atlantic. Indeed the question may be asked whether or not we are sometimes too much governed by stratigraphical considerations in determining the species of fossils. One is sometimes ready to suspect

that forms which would be identified if found in the same stratum are distinguished because they occur in different strata.*

Especially is this to be apprehended when the species is based on a single specimen as its type, which is frequently done. How many species might be made out of a single existing well limited specific form if every accidental variety were considered apart from its connecting links or without regard to its own abnormal deviation from the form of its ancestors and descendants.

The advance of our knowledge of fossil life, aided as it will be by the establishment of local societies for the study of Nature, must, by developing local collections, tend to show us old species in new places and on new horizons. Species from below will be found to rise and mingle with those belonging to higher levels. The hard lines of demarcation drawn between system and system, and between group and group will be blurred, and old distinctions will grow less distinct. It is idle to suppose or believe that systems constructed in the infancy of the science can exist as maturity

*A good illustration of this remark may be found attached to the description of *Pleurophorus costatiformis* M. & W. (Proc. Acad. Nat. Sci., Phil. 1865, p. 247), where the writer says: "Though we propose to name this as a new species, we confess that, if we had found it in Permian strata, we should have, from its external character at least, referred it to *Pleurophorus costatus*, Brown, (sp.). Indeed it seems to be as nearly like Prof. King's principal figure of that species (Perm. Foss., pl. XV., fig. 13.) as any other individual specimen could possibly be expected to be, and more nearly like it than any other figure of that shell which we have ever seen. Nevertheless, from the different horizons occupied by these shells, we have scarcely a doubt that if we could see the hinge and interior of that now before us, good specific differences would be observable."

This is equivalent to saying that in the present state of our knowledge these two names are synonymous. A better plan would be to refer the later to the already existing species and leave the distinction to be set up when distinctive marks are discovered.

approaches. The scaffolding must give way to the perfect building. Facts present themselves in a new light with increasing knowledge, and statements supposed, but wrongly, to be founded on facts are seen to be baseless. Palæontology in America is rapidly outgrowing its infancy, and the laws which aided its early development, if not relaxed, will check its free expansion.

The groups and systems moreover laid down in one part of the country, for example in the State of New York, cannot reasonably be expected to exist in perfect identity everywhere or anywhere else. Already, during my investigations in Pennsylvania, I have discovered marked and striking proofs of divergence from the New York types, both in association and range of fossils. Some details on this point will be found in the report on Columbia and Montour counties by Prof. I. C. White. Others will be published in my own report on Perry county, now in the press. (Published in 1885.) A few others will be noted in this paper.*

I.

In illustration of these remarks I may quote the following instances from the list of fossils here discussed:

Solenomya anodontoides (Meek,) is the most abundant shell in the collection from Wilkes-Barré, in the Lower Coal Measures. This same species, in specimens and matrix scarcely distinguishable, is common in the Cuyahoga shale of this county (Summit, Ohio). The Cuyahoga shale is

*A somewhat remarkable instance of this kind has quite recently come under my observation. The carboniferous Trilobites have been hitherto restricted to the genera *Phillipsia* and *Proetus*, with even and rounded tails. But I have lately seen a form from the Cuyahoga shale of the lower carboniferous of this county (Summit, Ohio), showing a fimbriate or spinous pygidium like those belonging to the genus *Dalmanites*. A note on the fossil appeared in "Science" of May —, 1884, and a full account will be published soon elsewhere. (See *Geol. Mag., July, 1884*).

here the uppermost member of the lower carboniferous, the higher beds of the group being absent. It is almost certainly below the mountain limestone which in southeastern Ohio and southwestern Pennsylvania forms a conspicuous horizon. Consequently there is a considerable interval between the two levels—the Lower Coal Measures in Luzerne county, Pennsylvania, and the Cuyahoga shale of Summit county, Ohio,—during all which we must admit the existence somewhere of this species, *Solenomya anodontoides*. In a general way and without descending to detail which would be here out of place, the relative position of these beds may be shown by the following section :

LOWER PRODUCTIVE COAL MEASURES.

Lower Carboniferous.	Conglomerate with Interconglomerate Coals, Nos. 1, 2, 3, and 3a.
	Mountain or Lower Carboniferous Limestone.
	Logan Group—Sandstones and Shales—of Southern Ohio.
	Cuyahoga Shale.
	Berea Shale.
	Berea Grit—Waverly Sandstone.
	Bedford Shale.
	Cleveland Shale.

Palaeoneilo Bedfordensis is another species of which the same may be said in a higher degree. Described by Meek from the Bedford shale of Cuyahoga county, Ohio, which, as may be seen from the above given section, underlies by a considerable interval the Cuyahoga shale, it reappears in the collection from Wilkes-Barré in the Lower Coal Measures of eastern Pennsylvania. Specimens of the species which I have collected from the Cuyahoga shale near this city, (Akron, O.) are absolutely undistinguishable from Meek's figures and description. To this species we must therefore assign a yet greater range than was given to that mentioned above, namely, from the Bedford shale of the Lower Carboniferous to the Lower Coal Measures.

Another case in point is *Grammysia (Allorisma) Hannibalensis*, (Shumard,) in the collection from Wilkes-Barré

This species was described in the Geological Report of Missouri, 1855 (Vol. II., p. 206), from the Kinderhook group of that state. The Kinderhook is the lowest bed of the mountain limestone in Missouri and some adjoining states. Consequently the geological range required to extend a fossil from the Kinderhook to the Lower Coal Measures is less than that given in the two cases already mentioned. The geographical range however is much greater; the distance from Missouri to eastern Pennsylvania being at least double that from the latter to Ohio. As if, however, to bridge over the interval and to assimilate the three cases, the same species occurs in the Cuyahoga shale at Akron, Ohio. Specimens which I have collected here are indistinguishable from Shumard's figure, and in all visible and ascertainable points from those sent to me from Wilkes-Barré. Taking this fact into account we have a third species ranging from the Cuyahoga shale of the Lower Carboniferous in Ohio to the Lower Coal Measures of Pennsylvania, and in this case occurring also in the intermediate Kinderhook limestone in Missouri.

But the most remarkable instance furnished by this collection from Wilkes-Barré is the shell which I have identified with *Schizodus quadrangularis*, figured by Hall from the Chemung of New York and the Waverly of Ohio. (Pal. N. Y., Vol. V.) No description of this species has yet appeared, so far as I am aware. In the "preliminary notice of Lamellibranch shells," (1870), the last page concludes with a few lines concerning it. The remainder was, I believe, destroyed by a fire in the publishing house, and has not yet been reprinted. From this partial description and the figure no doubt however can remain of the identity of the two shells, that from Wilkes-Barré and that from the Chemung of New York.

As Prof. Hall gives this species a range from Chemung to Waverly it is fair to infer that he has received specimens

from the Waverly group of Ohio. Not having yet seen it in Ohio I do not know in what division of the Waverly group Prof. Hall's specimen was found. I have however a shell from the Chemung rocks in Montour county, Pennsylvania, which I have identified with Prof. Hall's *Sch. quadrangularis*. This specimen is an almost perfect facsimile of that from Wilkes-Barré, so that even should the nominal identification admit of dispute, which I do not think is the case, the fact of the real identity remains, and we have an instance of survival from the Upper Chemung to the Lower Coal Measures.

In order to illustrate this case, which is somewhat striking, I have figured in outline the three specimens above alluded to, and have also added for comparison a copy of Hall and Whitney's *Dolabra Alpina*, from the Lower Coal Measures of the Des Moines Valley, Alpine Dam, Iowa.

- Fig. 1.—*Schizodus quadrangularis* . Pal., N. Y., Vol. V., pl. 75.
Fig. 2.— " " " . Coal Measures, Wilkes-Barré.
Fig. 3.— " " " . Chemung, Montour Co., Pa.
Fig. 4.—*Dolabra Alpina* Lower Coal Measure, Iowa.



II.

I have here dwelt on only those specimens of whose identity with the species to which I have referred them I feel fairly confident. Were several of the others in better condition a much stronger case could probably be made out. The bad preservation of most of them is especially to be regretted considering their scarcity and consequent interest. It may be observed that most of the species with which the Wilkes-Barré specimens are compared are from the West. It can scarcely be doubted that some day a much greater geographical range will be assigned to our Eastern and Western forms, and that many now bearing different names will be found identical. It is of little use however to build on insufficient foundations, and it is wiser to await the discovery of better specimens than to publish positive identifications on insufficient material, or to manufacture new so-called species which cannot be satisfactorily defined.

The conditions of deposition form in some of these cases a difficulty as great as those of geographical and geological range. At first thought it seems unlikely that species inhabiting the open sea of Missouri, Iowa and Illinois should have also left their remains in the coal-swamps of eastern Pennsylvania. Had these swamps consisted of fresh water the objection would be weighty indeed. But the list of species precludes this supposition, and the occurrence of a few crinoidal joints renders it totally impossible. According to the usually accepted analogies these beings were inhabitants of the open sea and the clear waters. A sea therefore that allowed the growth of crinoids, whether a bay or open ocean, could not be hostile to the growth of such other marine organisms as those whose names are given in the list below.

The total absence of brachiopods is also noteworthy and may perhaps be taken to indicate shallow water as one of the conditions of life, and deposition.

*III.***BELLEROPHON SUBLÆVIS. (HALL.)***Trans. Alb. Inst., 1856.*

A small Bellerophon, much broken, but agreeing closely in all important points with that quoted above, occurs among the specimens from Wilkes-Barré. I have therefore referred it to that species.

Prof. Hall's specimens were found in the Lower Carboniferous Limestone of Indiana and Illinois.

BELLEROPHON NAUTILOIDES.*Winch., Proc. Ac. N. S., 1862, p. 427.*

This is a small but well preserved fragment of a beautiful little shell exactly agreeing with Prof. Winchell's description in all ascertainable points. The type specimen was found in the Marshall group of the Lower Carboniferous of Michigan. It is beautifully and finely striate longitudinally over the whole surface including the carina which is not elevated or depressed, but limited by two longitudinal lines rather more distinct than the rest.

BELLEROPHON PERCARINATUS.*Con., Jour. Ac. Nat. Sc., Vol. VIII. p. 268.*

I can see no difference between Conrad's brief description and the specimens here referred to this species, except that the transverse ribs are not *acute*, otherwise it coincides well with Conrad's description and figure.

Conrad's specimen was found in the black shale overlying coal No. 7., Allegheny Mountain inclined planes.

CAPULUS ACUTIROSTRIS.*Hall, Trans. Alb. Inst., 1856.*

Two crushed and broken specimens which do not admit of identification may and probably do represent this species which was described from the Lower Carboniferous Limestone of Indiana and Illinois.

AVICULOPECTEN COXANUS.

Meek & Worthen, Proc. Acad. Nat. Sc., Phil., 1860, p. 453.

No figure of this species has been published, so far as I am aware, but Meek's description (l. c.), and his remarks appended to the description of *Av. Winchelli* (Pal. Ohio, vol. II., p. 296), combine to make the identification satisfactory. It may be remarked that the specimen here referred to is the right valve. Prof. Meek's description applied to a left valve from the shale of the coal measures of Illinois.

PECTEN MISSOURIENSIS.

Shumard, Geo. Rep. Mo., 1855, p. 207.

Two small, badly broken specimens, apparently represent this species, which was described from the lower carboniferous limestone (St. Louis group) of Missouri.

MODIOLA WYOMINGENSIS.

Lea, Jour. Ac. Nat. Sc., vol. II., Jan. 1853, p. 203.

One specimen in this collection I have referred to this species of Mr. Lea, but with some hesitation. It corresponds well in size, but the original type, judging from a tracing of the figure (l. c.), for which I am indebted to the kindness of Mr. E. B. Harden, is so imperfect that it is impossible to feel much confidence in a definition based upon it. Only a half, and that the lower and least important one, existed on the stone, and the fact that Mr. Lea thought such material worth description, speaks volumes for the rarity of fossil shells among the Wilkes-Barré coal-beds.

SOLENOMYA ANODONTOIDES.

Meek, Pal. Ohio, vol. II.

Though no single specimen is in good condition, yet comparison of many enables me to refer them with confidence to this species. This is the most abundant of all the forms in the collection, and seems to occur in great numbers in the black shales. The shells are flattened and usually crushed.

Meek's specimen was obtained in the lower coal measures¹ at Newark, Ohio.

MODIOMORPHA (?) PARVULA. (S. N.)

Shell very small, not exceeding half an inch in length, moderately convex. Hinge-line straight, extending nearly to the posterior end of the shell. Beaks not prominent, anterior nearly terminal. Posterior margin most extended near base, gradually rounding into the basal margin. Basal margin nearly straight and parallel or sub-parallel with hinge-line. Faint indication of a rounded ridge extending from the beak to the postero-basal margin. No teeth. Ligament external.

The specimens above described, and which I cannot refer to any published species, seem to be abundant in the black shales, as I have found ten specimens in the small collection examined. Some of these are very minute, and many of them are expanded, with both valves in apposition, as when connected by the hinge. I have placed it provisionally in Prof. Hall's genera, although I can find no hinge-tooth, deeming it better to do so than to form a new one on so slender a base.

GRAMMYSIA HANNIBALENSIS.

Shumard, Geol. Mo., 1855, p. 206.

The two specimens which I have referred to this species are very imperfect, but in every respect, so far as preserved, they resemble those which occur in the Cuyahoga shale of northern Ohio.

This is the third species occurring in the west which I have recognized among the specimens from Wilkes-Barré.

Prof. Shumard's type was found in the Lithographic limestone, at Hannibal, Mo.

PALAEONEILO BEDFORDENSIS.

Meek, Pal. Ohio, vol. II.

A single specimen, well preserved, agrees so closely with

Meek's figure and description, given in the place above cited, that the identity of the two seems beyond question. Meek's specimen came from the Waverly Group, of Ohio, the Bedford shale, at Bedford, Cuyahoga county, Ohio.

SCHIZODUS MEDINENSIS.

Meek, Pal. Ohio, vol. II.

The imperfect condition of this specimen, in some of its parts, makes their identification slightly doubtful. But the general resemblance is so strong that I have little hesitation in referring it to Meek's species, as above quoted.

SCHIZODUS QUADRANGULARIS.

Hall, Pal. N. Y., vol. V.

The shell which I refer to the above species is in a fair state of preservation, except near the hinge, and is obviously a Schizodus, though the teeth are not visible. It so precisely agrees with a specimen in my possession, from the Chemung rocks of Montour county, Pennsylvania, that I feel no hesitation in adopting the above specific name. I have given the outlines of both, below, for comparison. Except an almost imperceptibly greater degree of angularity in the antero-basal region of the Chemung fossil, there is absolutely no difference, except in size.

This species is remarkable in the collection on account of the great vertical range which the identification involves. Prof. Hall's specimens are marked from the Chemung and Waverly groups. This one comes from the coal measures. It consequently extends the species through the Catskill, Pocono, Mauch Chunk, and Pottsville areas, into the lower coal beds.

This specimen is also remarkably like a shell figured by Hall and Whitney in the Palæontology of Iowa (Vol. II., p. 29), with the name *Dolabra Alpina*. Unless better specimens demonstrate greater distinctness than at present appears, it is hard to see any reason why all these four.

should not be regarded as identical. I add, for comparison, an outline of the figure, given in the Palæontology of Iowa. Faint concentric striae, represented too conspicuously on the drawing above, are preserved on this specimen, but similar marks may have existed on the others, which are internal casts.

Dolabra Alpina (Hall and Whitney) is from the lower coal measures of Des Moines Valley, Alpine Dam, Iowa.

CYPRICARDELLA SUBELLIPTICA (?).

Hall & Whitney, Pal., Iowa.

A small specimen, about half an inch long and strongly lined concentrically, may be compared with the above species, but is not, I think, identical with it. It is, however, identical with a species I have found in the Cuyahoga shale, near Akron, but which remains at present unnamed.

IV.

The collection of shells here noticed is of considerable interest, from the fact that it is rare to find such fossils in connection with coal seams in the Wyoming coal field. The following passage, written by Mr. Isaac Lea, thirty years ago, is almost literally true in the present day :

"It is so rare in Pennsylvania to find impressions of mollusks in the shales immediately connected with the seams of coal, that I have not, in more than thirty years' observation, met with more than one instance of the kind. This specimen, taken by myself from a mass which had been brought out of a working coal mine, above Wilkes-Barré, Luzerne county, on the Susquehanna, has several species, belonging to at least two genera, which are accompanied with scales of fishes, evidently belonging to the ctenodians."

This extract is sufficient to show the value of the collection here discussed, from Wilkes-Barré. It is rather surprising that out of so small a number so many species should be found comparable, if not identifiable, with western

forms. The Wyoming Historical and Geological Society may be congratulated on having made so valuable and interesting a contribution to our knowledge of the coal Fauna of Eastern Pennsylvania, and I may be allowed to express the hope that they will continue their search, and that other societies, as well as individuals, residing in and near the coal fields, will be stimulated to "go and do likewise."

I have been unable to learn the exact horizon upon which these fossils occur, and cannot therefore refer them to any particular coal bed, but must content myself with saying that they were found in the coal measures near Wilkes-Barré.

The facts here given, and others that might be added, should prepare us to expect, as time passes and palæontology progresses, revelations yet more startling and uncanny. Those who are disposed to set up any palæontological system or "canon" as a fetish, to be worshiped, a bed of Procrustes by which all must be measured, will find themselves in opposition to nature, in whose record few hard or fast lines or planes of demarkation occur. Such lines or planes are but so many proofs of our ignorance of the history of life, and the thoughtful student must expect to see, with advancing knowledge, the disappearance of every one of them, and to see it, not with regret, as many men witness the overthrow of a long cherished opinion, or the disruption of a long standing association, but with pleasure, and to hail it as an evidence that the gray twilight of the morning is giving place to the clearer light of day.

The course of life upon the earth has, so far as we can learn, been uninterrupted and continuous, without world-wide cataclysms or convulsions. Species have lived side by side, and have at length died out one by one, as they are now dying out. Other forms have taken their places, in

the same slow manner. In this way the life of the earth has been changed by imperceptible degrees. And when our History of Life is fully written, it will agree with the Course of Life. It will not be, as now, a number of disconnected volumes, the thread of whose story begins and ends in each, but a completed series, following on, in unbroken succession, the order of time, from the earliest terrestrial life to the present. Our imperfect palæontological record may be likened to a few chapters taken from Hume's great History of England and preserved, while all the rest was lost. The reader of these disjointed fragments would naturally wonder whence the characters came, of whom he read. They are not mentioned in the next preceding chapter which he possesses, nor do they appear to have existed in the next following. Coming in from the darkness of one unknown, they pass out into another equally mysterious and are lost. Specially characteristic of the age treated of in one chapter, the foregoing and succeeding chapters know them not. Read in this way, Julius Cæsar and Caswallon would seem like the characteristic fossils of the earliest or Archæan ages of British history, Alfred and Gudrum of another, William I., Odo, Edgar Atheling, and Matilda of a third, Cranmer and Wolsey, Raleigh, Drake and Burleigh, Cromwell, Hampden and Milton, Walpole and Marlborough, Pitt and Fox, would all become, as it were, the peculiar fossils of their respective ages or systems, and a history of England might in this way be constructed, consisting of a number of disjointed chapters, separated by gaps, of whose length the reader could form little idea.

This is not an exaggerated picture of the existing geological record. Few who have not worked in it, are aware how imperfect it is. The gaps probably exceed the chapters in length. And our practical knowledge of the course of life is of the same kind. The gradual addition of the missing chapters of Hume's History of England, in our sup-

posed case, would surely break down every "canon" of history based on their absence. The characteristic fossils of one age would often be found in the next preceding or following when these were discovered. Cranmer and Raleigh, Cromwell and Milton, would not be strictly limited to one short period. They would no longer be meteors on the record, but suns or stars—rising, culminating, and setting. They would no longer be "without father, without mother, and without descent, having neither beginning of days nor end of life," but each would show a time of appearing and a time of disappearing from view. No wholesale extinction would be met with, coinciding with the ends of the chapters; but one by one the historic characters would be found to die out, and one by one to be followed by others. And in the same way, when the palæontological record is complete, we may expect to see our present "systems" merged at both ends with those that precede and follow them; and every "canon" of palæontology, based on the absence of the missing chapters, will be overthrown. Characteristic species will scarcely exist. They will rise into higher, and come up from lower, horizons than those which they were supposed to characterize, and the hard, fast lines, now drawn, will be blurred. Instead of presenting to us a series of disconnected chapters, the history will show the commencement of species, in many cases deep down below their now known level, and their survival to others far above it. Each will overlap others at both ends, and sharply defined systems will become as unnatural as is now the Linnæan classification of plants. A few devotees of fetish "systems" may be shocked, but to the free and unprejudiced student of nature, especially from the evolutionary standpoint, all this will be welcome as new and beautiful truth.

REPORT ON THE WYOMING VALLEY CARBONIFEROUS LIMESTONE BEDS.

BY CHARLES A. ASHBURNER,

Geologist in Charge of the Anthracite Survey, and Corresponding Member of the Wyoming Historical and Geological Society; accompanied by a

DESCRIPTION OF THE FOSSILS CONTAINED IN THE BEDS,

BY ANGELO HEILPRIN,

Professor of Invertebrate Palaeontology, Academy of Natural Sciences, Philadelphia.

PART I.

The occurrence of limestone-beds, interstratified with the shales, sandstones and coal-beds of the Coal Measures in Pennsylvania is not unusual, on the contrary they characterise all the bituminous measures in the State.

In the most recent coal measures, and the highest in the geological column, in Washington and Greene Counties, there occur sixteen beds of limestone, with an aggregate thickness of about 100 feet, contained in a section of coal measures having a total thickness of about 1000 feet.

In the Upper Productive Measures, which extend from the bottom of those just referred to, down to and including the Pittsburgh coal-beds, having an aggregate thickness of 500 feet, there occur five prominent limestone-beds having a thickness of 105 feet.

In the Lower Barren Measures of Beaver County, which extend from the bottom of the Pittsburgh coal-bed down to

NOTE.—Published by permission of J. P. Lesley, State Geologist, in advance of the publication of the Annual Report of the Progress of the Geological Survey for 1885.

the bottom of the Mahoning Sandstone, a distance of about 550 feet, there occur at least four well defined limestone-beds, the aggregate thickness of which is from 15 to 20 feet.

In the Lower Productive Measures, which contain the coal-beds mined extensively in many of the counties immediately back of the crest of the Allegheny Mountains, including the counties of Cambria, Clearfield, Jefferson, Elk, etc., there occur four easily recognized limestone-beds, having an aggregate thickness of from 15 to 20 feet, included in strata ranging from 300 to 400 feet in thickness. These coal measures extend from the Mahoning Sandstone down to the Pottsville Conglomerate.

In addition to these well defined limestone-beds numbering in all 29, with an aggregate thickness of about 240 feet, and included in a vertical column of bituminous coal measures 2400 feet thick, there occur a number of sporadic or irregularly deposited limestone-beds of variable thicknesses; the thickness of any one of which, however, seldom exceeds 3 or 4 feet.

A vertical bore-hole in the extreme southwestern corner of the State would pierce this entire column with the included limestones and bituminous coal-beds. It is highly improbable, however, that all of these 29 beds would be found existing as limestones at any one locality, since we have found by experience, that, while all the coal measure limestone horizons are remarkably persistent, yet in special areas the limestones thin down almost beyond recognition, or are entirely replaced by calcareous or argillaceous slate or shale and sometimes even by sandstones which contain little or no lime.

In the Coal Measures of the anthracite region, however, the occurrence of limestone-beds is rare, and the only locality where clearly defined and persistent beds of limestone have been located by the Geological Survey, is in the Wyoming Valley. These beds are of special interest to

geologists and palaeontologists, on account of the number of fossil remains of water shells found in one of the most persistent of the beds, and which I have named the Mill Creek limestone-bed.

The existence of limestone in the Coal Measures of the Wyoming Valley, particularly in the vicinity of Wilkes-Barré, has been recognized for many years. A farmer on the farm of Judge Garrick Mallory is reported to have quarried limestone over 35 or 40 years ago, from an outcrop on the south side of Mill Creek below the mouth of Laurel Run, at a locality to be referred to later, and to have gathered loose pieces of stone from the surrounding fields; this limestone was burned in an old kiln in the immediate vicinity for lime, which was used principally as a fertilizer.

Dr. Charles F. Ingham and Mr. Chris. H. Scharar, prominent and active members of the Wyoming Historical and Geological Society, together with the late Mr. Harrison Wright, Secretary of the Society, and other members, have made an interesting collection of fossil specimens from an outcrop of one of these Wilkes-Barré limestone-beds, near the old Hollenback Dam across Mill Creek, at the head of a supply race of the now abandoned New York and Pennsylvania Canal. This limestone outcrop is on the Mill Creek bed.

Shortly after the commencement of the Anthracite Survey in 1880, I had the pleasure of examining this collection of fossils with Mr. Wright in the Society's rooms at Wilkes-Barré, and subsequently had an opportunity of visiting the locality on Mill Creek, from which these fossils were obtained, in company with both Mr. Wright and Dr. Ingham. The importance of having a determination made of the genera and species of these fossil forms, which were currently reported to be distinctly Permian, was early appreciated by the State Geologist, Professor Lesley. The fragmentary character of the specimens, together with the questionable

species of many of them, made it necessary that the fossils should be subjected to the scrutiny of an expert palæontologist.

The problems in practical geology which have occupied the attention of the members of the Survey corps, and which have had such an important bearing upon the economical development of the mineral resources of the State, have been so numerous, that the State appropriations made for the Survey have not permitted of the large number of fossil specimens which have been collected by Survey assistants, being studied and reported on by an expert palæontologist.

The great number of fossil specimens which have been collected, particularly in the central and north-western parts of the State, have been catalogued as to their locality and the lithological characteristics of the strata in which they were found; and in accordance with a special act of the Legislature, have been deposited with the Academy of Natural Sciences in Philadelphia. The Wilkes-Barré fossil specimens in the possession of the Wyoming Historical and Geological Society, and those privately held by Mr. Scharar, were placed at the disposal of the Survey in 1880 for examination. After a cursory examination of these specimens I was convinced that the species could not be satisfactorily determined, for the reasons already assigned, except by a specialist.

At the request of Professor Lesley, the specimens were examined at different times, by two of our field geologists who had given considerable time to the study of palæozoic fossils. Failure in one case to identify a number of the forms and in the other case to assign questionable names to a number of them, led finally to Professor Angelo Heilprin, professor of invertebrate palæonotology at the Philadelphia Academy of Natural Sciences, being induced to undertake the examination. Professor Heilprin's time being almost

entirely taken up with work previously engaged upon, the progress made in the careful and systematic study of the Wilkes-Barré fossils was necessarily slow. The thoroughness with which Professor Heilprin pursued his work, and the unquestioned correctness of his conclusions, which, however, differ largely from the conclusions of others who have previously examined the specimens, should be a source of congratulation, both to the Society and the Survey, that no publications have been made prior to Professor Heilprin's determinations.

Those who have studied these fossils for a number of years have generally assigned them to the Permian formation. The occurrence of the Mill Creek limestone-bed, however, in which the fossils were found, inter-stratified with sandstones and shales included between two coal-beds of apparently undisputed Carboniferous Age, made the study of the fossils all the more interesting and their determination the more important.

The names assigned to the forms examined by Professor Heilprin, together with careful descriptions and references, make his paper (Part II.), which follows, complete in itself, and it is only necessary to refer to the geological relationships of the limestones from which they were taken.

A more extended and careful examination of the outcrops of the Mill Creek limestone will no doubt reveal other species not contained in the specimens which have so far been found and examined.

In order to aid future explorers to identify specimens, which they may find, photographs of the more distinct specimens were made, but failed to show with sufficient definition the details of the forms as they appear on the specimens themselves, so that independent drawings of the fossils, from the specimens and photographs combined, were made under Professor Heilprin's personal supervision. These drawings are reproduced on the accompanying page

plates. On account of the indistinctness of some of the specimens as represented on the page plates, and in order to permit students more easily to identify new specimens, other drawings, more complete in form, of the same specimens, were made and are inserted in the text.

The Mill Creek limestone-bed outcrops along the north side of Mill Creek near the breast of the old Hollenback dam and about midway between the River street bridge and a bridge of the Lehigh Valley Railroad which crosses the creek immediately at its mouth.

The limestone is siliceous, ferruginous and extremely hard and from 1 foot to 15 inches thick.

It occurs between the Prospect shaft anticlinal, which runs due west from Prospect shaft across the Susquehanna river, and the center of the Cemetery basin; the axis of the basin crosses River street about midway between Chestnut and Linden streets.

The dip of the strata, where the limestone outcrops, is toward the south. All the specimens of fossils obtained from this stratum were very much stained with oxide of iron.

When the lock of the Mill Creek Slack Water Navigation, on the south side of the creek and immediately opposite this limestone outcrop, was built, about 1865, a number of fossils were obtained, from the excavation made in the calcareous black slate at the foot of the lock.

The Mill Creek limestone outcrops again along the fence of the Hollenback Cemetery, facing the Susquehanna river on the west side of Mill Creek, about 65 feet south of the Lehigh Valley Railroad track.

On the road between Kingston and Plymouth and about half a mile north-east of the Boston breaker an outcrop of limestone occurs which is 2 feet thick. This outcrop Mr. Scharar believes to be on the Mill Creek limestone.

As nearly as can be made out the Mill Creek limestone occurs between 30 and 40 feet beneath the Joe Gibbs coal-

bed. This coal-bed outcrops on either side of River street on both the Hollenback Cemetery bank and the Hospital bank, and near the end of Linden street. The dip of the bed is east of north from the Cemetery anticlinal into and toward the Cemetery basin. (See Mine Sheet, No. VIII., Atlas Northern Anthracite Field, Part 1).

In the Dorrance shaft, a little over a quarter of a mile southwest of this outcrop, what has been taken for the Joe Gibbs coal-bed was cut in the shaft, at a depth of 130 feet 7 inches. The dip of the strata in the Dorrance shaft from the top of the shaft down to the coal-bed, ranges from 39 to 37 degrees in a direction south. Although, at the time that the section of the Dorrance shaft was measured by Mr. Frank A. Hill, Assistant Geologist, the *representative* of the Mill Creek limestone was not noticed, it would, upon close examination, probably be found in the shaft at a depth of about 170 feet.

On the south-east bank of the canal 800 feet south-west of the mouth of Mill Creek and near the line separating the Hollenback and the Public Cemeteries, occurs an outcrop of a siliceous non-fossiliferous limestone much softer than the Mill Creek limestone. This bed I have named the Canal limestone, and it occurs about 30 feet stratigraphically below the Mill Creek bed. The Canal limestone is 2 feet thick.

Seventy feet south-west of this limestone outcrop occurs an interesting outcrop of dark gray slate, the top of which is about 10 feet below the Canal limestone-bed. Immediately after the original deposition, in the water basin of the Carboniferous Age, of the mud and silt which ultimately formed this slate-bed, the mud and silt were washed away either by a current in the depositing waters or by a stream which flowed over the mud bed. In the latter case the level of the water, which existed during the time that the mud and silt were deposited, must have been considerably lowered, by the water being withdrawn, in order to permit of the formation

of a creek bed. This *ancient cut* was subsequently filled with sand and mud, which replaced the mud and silt which had been washed away.

The Canal limestone-bed was cut in the Dorrance shaft and pieces of limestone could quite recently be found in the rock dump in the vicinity of the shaft. The slate passed through by the shaft between a depth of 207 feet 6 inches and 223 feet 6 inches is, without doubt, the representative of the slate found along the river bank, below the Canal limestone. An outcrop of the Mill Creek limestone was found by Mr. Scharar west of the dirt dump at the engine house, near the foot of the Dorrance breaker plane, and about midway between the Dorrance shaft and the Dorrance breaker. About 25 feet stratigraphically above the limestone outcrop an outcrop of the Joe Gibbs coal-bed is reported to have been found, the coal-bed being apparently about 1 foot thick.

About 10 feet above the top of the Conyngham shaft a limestone-bed was cut in an adjoining ditch. This limestone-bed is without doubt the representative of the Canal limestone.

On Main street north-east of Elm street, and very nearly on the line between the Conyngham and Prospect shafts, occurs an outcrop of the Mill Creek limestone, having a dip of 85 degrees due south; the outcrop is located on the crest of the Cemetery anticlinal, and a number of fossils were obtained from the limestone at this point.

About 150 feet nearly north-east from this latter outcrop and on the top of a small hill, the Mill Creek limestone outcrops on the north dip. This was the point from which was quarried most of the lime before mentioned.

The Mill Creek limestone is exposed on the west side of River street between the Mill Creek bridge and the bridge over the railroad at the foot of the Prospect culm-bank. This limestone is also exposed in the Lehigh Valley Railroad cut west of the Prospect breaker.

In this railroad cut the Canal limestone is exposed. Ninety feet below the Canal limestone at this point, the River coal-bed, which is the representative of the Rock bed struck in the Dorrance shaft at a depth of 325 feet 9 inches, occurs. Twenty-five feet stratigraphically below this coal-bed occurs a third limestone.

In addition to these three limestone beds two others are reported, but I did not find their outcrops.

In the Dundee shaft on the south side of the Susquehanna river about a mile and a half east of Nanticoke, fossils were obtained in a black slate stratum extending from a depth of 281 feet 3 inches to 314 feet 9 inches. The exact position of this slate-bed in the Coal Measures is not known, since the Dundee shaft section has never been satisfactorily compared with other sections. Mr. Hill is disposed to believe that the Dundee fossiliferous slate is about 600 feet above the Hillman coal-bed.

In a cut on the Lehigh Valley Railroad south-west of the Hillman colliery breaker there is exposed 3 feet of a tough siliceous limestone which occurs 10 feet above the Hillman coal-bed. This latter limestone has been by some considered to be the same as the Mill Creek limestone-bed, there is, however, nearly 500 feet of strata between the two limestones. No fossils have been found in the Hillman limestone.

The relative position, of these limestone-beds, in a general section of the Coal Measures of the Wyoming Valley, is shown in the following section, compiled from the Dorrance shaft, down to the bottom of the Rock coal-bed; from thence from the Conyngham shaft section, down to the bottom of the Baltimore coal-bed; from thence from the record of the Baltimore bore-hole down to the Red Ash coal-bed; and from thence, from the Red Ash bore-hole to the bottom of the section.

		Feet	Inches.
1.	Slate	51	5
2.	Coal and dirt	2	10
3.	Slate	7	2
4.	Sandstone, soft	2	1
5.	Slate	21	1
6.	Sandstone	5	5
7.	Slate	3	4
8.	Sandstone, hard	11	1
9.	Slate	1	10
10.	Joe Gibbs coal-bed	1	10
11.	Sandstone	30	0
12.	MILL CREEK LIMESTONE	1	0
13.	Sandstone	25	0
14.	CANAL LIMESTONE	2	0
15.	Slate	14	0
16.	Coal	1	10
17.	Sandstone	11	0
18.	Slate and sandstone	7	5
19.	Sandstone	13	1
20.	Slate and fire clay*	2	2
21.	Sandstone	39	4
22.	Slate	7	0
23.	Rock or K. coal-bed	7	2
24.	Slate	3	2
25.	Coal	2	6
26.	Slate and sandstone	25	0
27.	LIMESTONE	2†	
28.	Conglomerate, sandstone and slate	33	0
29.	Abbott, 7 foot or J. coal-bed . . .	5	0
30.	Sandstone	51	0
31.	Conglomerate	10	0
32.	Sandstone	15	0
33.	Bowley or I. coal-bed	5	0
34.	Slate	17	0
35.	Conglomerate	20†	

* This stratum is probably calcareous and may in some cases be the limestone-bed representative of one of the limestone-beds whose outcrop I did not find.

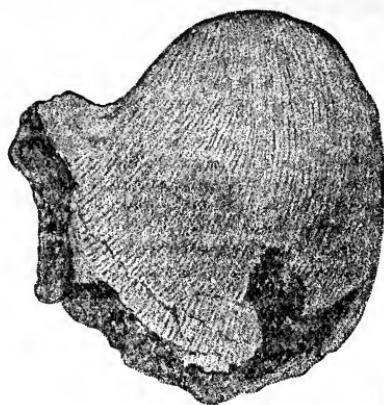
† More or less.

		Feet	Inches.
36.	HILLMAN LIMESTONE	3	0
37.	Slate	10	0
38.	Hillman or H. coal-bed	16	0
39.	Conglomerate and sandstone .	150	0
40.	G. coal-bed	3	0
41.	Sandstone	57	0
42.	5 Foot or F. coal-bed	3	0
43.	Fire-clay	12	0
44.	Sandstone	116	0
45.	Baltimore, E. or Mammoth coal-bed	16	0
46.	Sandstone	106	0
47.	Coal-bed	2	0
48.	Sandstone	26	0
49.	Coal-bed	1	0
50.	Sandstone	87	0
51.	Coal-bed D	4	0
52.	Slate	6	0
53.	Coal-bed	1	0
54.	Slate	21	0
55.	Ross or C. coal-bed	7	0
56.	Sandstone	28	0
57.	Red Ash or B. coal-bed	17	0
58.	Slate	2	0
59.	Coal bed A.	2	0
60.	Slate and standstone	11	0
61.	Conglomerate, Pottsville No. XII.	96	0
62.	Mauch Chunk Red Shale No. XI.	<hr/>	<hr/>
	Total thickness of measures .	1260	00

PART II.

Although some doubt has been entertained by certain geologists and palæontologists as to the age of the deposits represented by the fossils in question, whether Upper Carboniferous or Permian, there is, in my opinion, not the remotest foundation for the existence of such doubt. Apart from all stratigraphical evidence, which appears to be absolutely confirmatory of the evidence presented by palæontology, we have, in the numerous and varied organic remains, the most indisputable demonstration of the Carboniferous formation. By far the greater number of the fossils—not impossibly all of them—have already been described from the equivalent, or nearly equivalent, deposits of the States west of Pennsylvania, concerning whose age there appears to be no question. But even if there were such a question in some instances it would not effect the present issue, since the Wilkes-Barré fossils unequivocally represent Carboniferous species. Not a single distinctively Permian fossil occurs in the collection, although the *Schizodus* forms may perhaps with propriety be considered to represent as well a newer as an older horizon. The fragments of Trilobites (*Phillipsia*) are in themselves sufficient to dispel any doubt that might arise as to the stratigraphy of the region, inasmuch as we know of no members of this group of organisms surviving the Coal period, unless they be the forms described by Shumard from the very doubtfully placed Permian deposits of the Sierra Madre. At the same time it is by no means impossible, or even very improbable, that indisputable Permian Trilobites may yet be discovered.

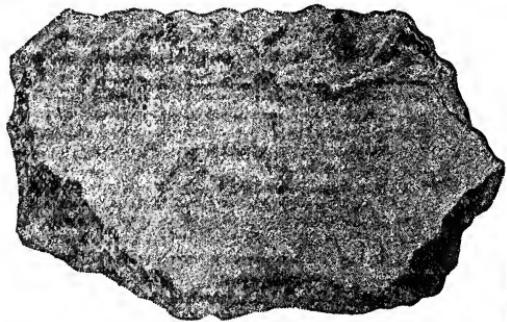
The fossils occur in a very ferruginous earthy limestone of a rusty-yellow color, and are mainly in the nature of casts and impressions. They are the property of the Wyoming Historical and Geological Society of Wilkes-Barré, and of Mr. Chris. H. Scharar, of Scranton, through whose kindness



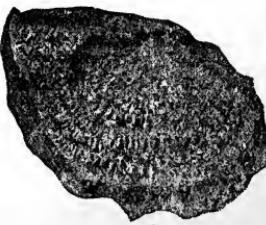
1 PRODUCTUS CORA.



2 ATHYRIS SUBQUADRATA.



3 CHONETES MILLEPUNCTATA.



4A PRODUCTUS NEBRASCENSIS?



4 PRODUCTUS NEBRASCENSIS?



4B PRODUCTUS NEBRASCENSIS?

they have been placed in the hands of the Geological Survey for examination. In addition to these a number of other fossils, from the black shales of the same region, were sent on by the Wilkes-Barré Society for determination. The species of the latter specimens are in most cases only doubtfully determined. They are from the Upper Coal Measures :

- Modiola minor*, Lea.
- Modiomorpha* sp. (?) (near to *M. alta*, Conrad.)
- Modiomorpha* sp. (?) (near to *M. complanata*, Hall.)
- Edmondia Burlingtonensis*, White. (?)
- Palæoneilo Bedfordensis*, Meek.
- Aviculopecten* sp. (?)
- Pterinopecten* sp. (?)
- Grammysia Hamiltonensis*, Shumard.
- Grammysia* sp. (?) (fig. 8)
- Schizodus* (near to *S. quadrangularis*, Hall.).
- Schizodus* sp. (?)
- Solenomya anodontoides*, Meek.
- Platyceras acutirostris*, Hall.
- Bellerophon percarinatus*, Conrad.
- Bellerophon sublaevis*, Hall. (?)

The following list comprises most of the fossils from the Mill Creek limestone bed:

BRACHIOPODA.

Discina.

DISCINA CONVEXA, Shumard. (Fig. 18.)

Trans. St. Louis Acad. I., p. 221 (1858).

White, Geol. Rept. Indiana, 1883, p. 121, pl. 25, fig. 9.



18 *DISCINA CONVEXA*.

Two impressions of *Discinae* occur in the rock, one of which is unmistakably referable to the above species. It measures about an inch in the basal diameter, and somewhat more than a third of an inch in the apical height of the convex valve. The con-

centric lines are well indicated. The impression of the second specimen is not as clearly defined, and may possibly represent *Discina Newberryi*, which, however, does not appear to differ much, if at all, from *D. convexa*.

Chonetes.

CHONETES (?) MILLEPUNCTATA, *Meek and Worthen*. (*Fig. 3.*)

Meek and Worthen, *Proc. Ac. Nat. Sci. Phila.*, 1870, p. 35.

Meek and Worthen, *Geol. Surv. Illinois V.*, p. 566, pl. 25, fig. 3.

Several determinable impressions of this remarkable brachiopod, one of which, measuring two and a half inches across, would indicate in the perfect specimen an expanse of about four inches. Punctae very fine, and exceedingly numerous.

Productus.

PRODUCTUS CORA, *D'Orbigny*. (*Figs 1 and 1a.*)

White, *Geol. Rept. Indiana*, 1883, p. 126, pl. 26., figs. 1, 2, & 3.

This species is represented by a large fragment (upper moiety of valve), and by a nearly perfect convex or vertical valve, in which the distinctive characters of the species—the fine longitudinal lines, without medial impression, and broad corrugated auriculation—are clearly exhibited. Umbonal height somewhat more than two inches.

PRODUCTUS NEBRASCENSIS?, *Owen*, *Figs. 4, 4a, 4b, and 4c.*



4c *PRODUCTUS NEBRASCENSIS?*



Owen, *Geol. Rept. Wisc., Iowa, and Minn.*, p. 584, pl. V, fig. 3. *White*, *Geol. Rept. Indiana*, p. 122, pl. 24, figs. 7, 8 and 9.

There are several fairly well-preserved specimens of a very convex, and strongly scrabicolate, Produc-

tus, whose nearest relationship, among American forms, appears to be with *P. Nebrascensis*. It seems to differ from this species, however, in the more prominent pustulation of the dorsal valve, a character in which it agrees more nearly with the common European *P. pustulosus* (Phillips). This one distinctive feature is probably of not more than varietal importance, and I accordingly prefer to place the species under *P. Nebrascensis*.

Athyris.

ATHYRIS SUBQUADRATA, Hall. (Fig. 2.)

Hall, Iowa Rept. vol. I. part 2, p. 703. pl. XXVII., fig. 2.

Several more or less perfect casts.

Spirifer.

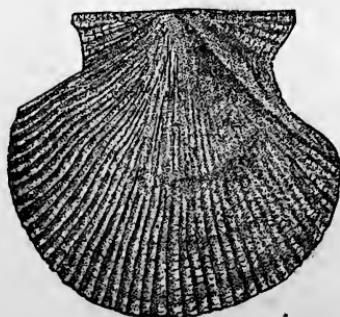
SPIRIFER LINEATUS?, Martin.

Very doubtful.

ACEPHALA.

Aviculopecten.

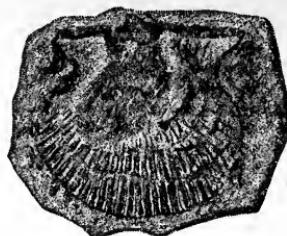
AVICULOPECTEN WINCHELLI, Meek. (Figs. 6, 6a, and 6b.)



68 *AVICULOPECTEN WINCHELLI*.

Meek, Ohio Geol. Rept. II., p. 296, pl. 15, fig. 5.

Two more or less perfect impressions.



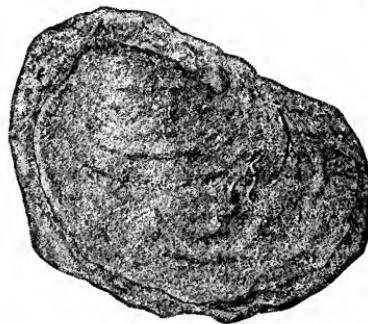
6 AVICULOPECTEN OCCIDENTALIS.



6 AVICULOPECTEN WINCHELLI.



7 SCHIZODUS WHEELERI.

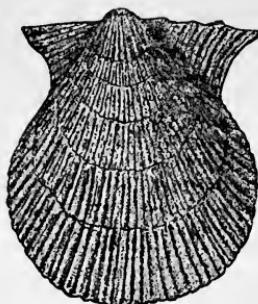


8 GRAMMYSIA (SP?)



9 SCHIZODUS CUNEATUS.

AVICULOPECTEN OCCIDENTALIS, Shumard. (Figs. 5 and 5a.)



5a *AVICULOPECTEN OCCIDENTALIS*.

Shumard, 1855, *Swallow. Geol. Rept. Missouri*, p. 207, pl. C, fig. 18.
White, *Geol. Rept. Indiana*, 1883, p. 143, pl. 28, fig. 3.

Eumicrotis.

EUMICROTIS HAWNI, Meek & Hayden.

Trans. Albany Inst. IV. (1858).
Meek and Worthen, *Geol. Surv. Ill.*, II., p. 338, pl. 27, figs. 12, 13 and 14.

An obscure impression, which may be that of this species, but very doubtful.

Monopteria.

MONOPTERIA (PTERINEA) GIBBOSA, Meek and Worthen. (Figs. II and IIa.)

Meek and Worthen, *Proc. Chicago Acad Nat. Sci.*, 1866, p. 20.

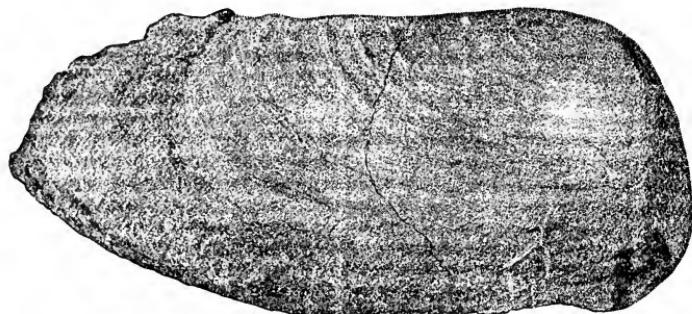
Meek and Worthen, *Geol. Surv. Ill.*, II., p. 340, pl. 27, fig. 11.

White, *Geol. Rept. Indiana*, 1883, p. 139, pl. 30, figs. 11 and 12.

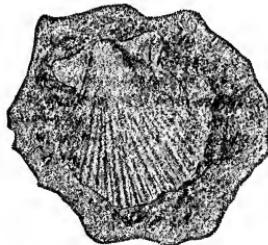
One specimen, which very clearly exhibits the distinctive features of the species. The species appears to be very intimately related to *Monopteria auricula* of Stevens (*Am. Journ. Science* XXV., p. 265), and to *Gervillia longispina*, Cox (*Kentucky Rept.* III., p. 568).



IIa *MONOPTERIA GIBBOSA*.



10 *ALLORISMA SUBCUNEATA.*



8A *AVICULOPECTEN WINCHELLI.*



12 *PINNA PERACUTA.*

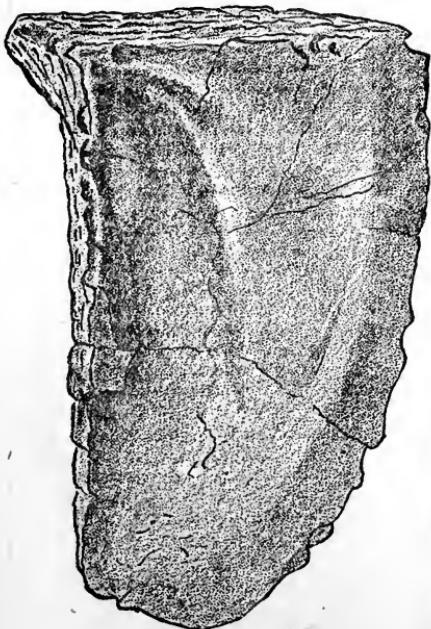
11 *MONOPTERIA GIBBOSA.*

Pinna.

PINNA PERACUTA, *Shumard.*
(*Figs. 12 and 12a.*)

Shumard, Trans. St. Louis Acad.,
I., p. 214 (1858.)
White, Geol. Rept. Indiana,
1883, p. 145, pl. 28, figs. 1 and 2.

Several impressions and casts, one of the latter fragments measuring five inches in length, and two and a half in greatest width.



15A MYALINA SUBQUADRATA.

Myalina.

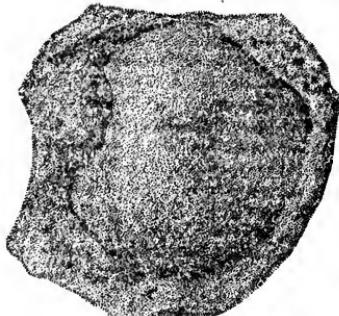
MYALINA SUBQUADRATA, *Shumard.* (*Figs. 15 and 15a.*)

Swallow, Geol. Surv. Missouri,
p. 207, pl. C. fig 17.

Several fragmentary casts and impressions.



12A PINNA PERACUTA.

7a *SCHIZODUS WHEELERI*.14 *PHILLIPSIA SANGAMONENSIS*.15 *MYALINA SUBQUADRATA*.16 *MACROCHEILUS PRIMIGENIUS*.17 *ORTHONOTA ?*

Macrodon.

MACRODON OBSOLETUS, Meek. (Fig. 19.)



Meek, *Rept. Regents Univ. W. Virginia*, 1871.
Meek, *Ohio Rept. Palaeontology II.*, p. 334, pl. 19, fig. 9.

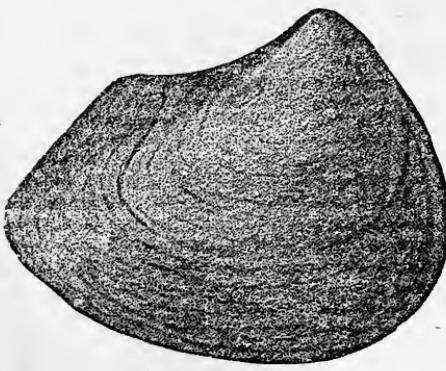
19 MACRODON OBSOLETUS.

Schizodus.

SCHIZODUS CUNEATUS(?) Meek. (Figs. 9 and 9a.)

Ohio Rept. Palaeontology II., p. 336, pl. 20, fig. 7.

A cast of a large *Schizodus*, measuring two inches in length, may possibly belong to this species; the absolute specific determination is somewhat doubtful, however.



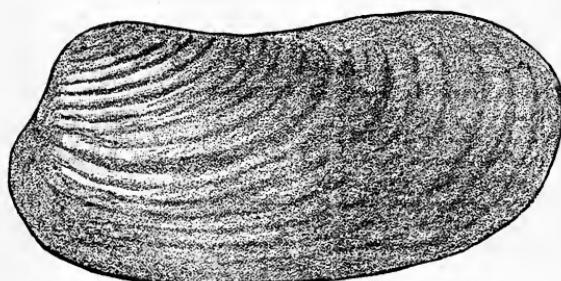
9A SCHIZODUS CUNEATUS.

SCHIZODUS WHEELERI, Swallow. (Figs. 7 and 7a.)

Swallow, *Trans. St. Louis Acad. II.*, p. 96 (1862).
White, *Geol. Rept. Indiana*, 1883, pl. 30, figs. 3, 4 and 5.
Several nearly perfect casts.

Allorisma.

ALLORISMA SUBCUNEATA, Meek and Hayden. (Figs. 10 and 10a.)

10a *ALLORISMA SUBCUNEATA.*

Meek and
Hayden, Pal
Upper Mis-
souri, 1864,
p. 37, pl. I.,
fig. 10.
White,
Geol. Rept.
Indiana,
1883, p. 148,
pl. 31, figs.
1, 2 and 3.

Grammysia.

Undetermined casts and impressions.

GASTEROPODA.

Macrocheilus.

MACROCHEILUS PRIMIGENIUS, Conrad. (Figs. 16 and 16a.)



Conrad, Trans. Geol. Soc. Pennsyl. 1835,
p. 267, pl. 12, fig. 2.

Conrad, Iowa Report, I., p. 720.

One fairly defined cast.

Bellerophon.

BELLEROPHON NODOCARINATUS (?) Hall. (*Fig. 13a.*)
Hall, Iowa Rept. part II., p. 723, pl. XXIX., fig. 15, a, b, and c.
BELLEROPHON CRASSUS (VAR.) (?) Meek and Worthen.

Meek and Worthen, Proc. Ac. Nat. Sci. Phil'a. 1860, p. 458.

The identification of both of these species is somewhat doubtful.



13* **BELLEROPHON NODOCARINATUS?**

CEPHALOPODA.

Nautilus sp. (?)
Orthoceras sp. (?)
 Both genera represented by several ill-defined casts and impressions.

TRILOBITA.

Phillipsia.

PHILLIPSIA SANGAMOENSIS, Meek and Worthen. (*Figs. 14 and 14a.*)



Meek and Worthen, Proc. Ac. Nat. Sci. Phila. 1865, p. 271.

Meek and Worthen, Geol. Surv. Illinois, V p. 615, pl. 32, fig. 4.

Represented by two pygidia.

14A **PHILLIPSIA SANGAMONENSIS.**

OBITUARIES.

The Historiographer, Geo. B. Kulp, Esq., presented the following biographical notices of deceased members at the several meetings:

STEWART PEARCE.

[Read before the Society, Dec. 12, 1884.]

The ancestors of Stewart Pearce were protestant soldiers, who entered Ireland from England with the army of Cromwell in 1649. Receiving confiscated lands in part payment for military services, a portion of the family settled near Enniskillen, in the province of Ulster. In 1690 his great-great-grandfather, in company with four brothers, entered the army of William III., and fought shoulder to shoulder with Huguenots and English blues against the catholic King James II. at the celebrated battle of the Boyne.

Edward Pearce, the great-grandfather of Stewart Pearce, was born in Enniskillen, August 6, 1701, and married Frances Brassington, of Dublin. They had three children born in Ireland, with which little family he sailed for America in May, 1737. Two of the children died of small-pox on the passage. Mr. Pearce arrived in Philadelphia in August, having been thirteen weeks in crossing the ocean.

Cromwell, the remaining child, was born in December, 1732, and was nearly five years old on his arrival in Pennsylvania. The family remained in Philadelphia until the spring of 1738, when they removed to the neighborhood of St. David's church in Radnor township, Chester county, Penn'a.

Edward Pearce died March 6, 1777, and was buried at St. David's church, Radnor.

Cromwell Pearce, the son of Edward Pearce, was commissioned May 8, 1758, lieutenant in the battalion of Penn-

sylvania regiment of foot, and served under General Forbes, the successor of General Braddock. He married Margaret, daughter of John and Margaret Boggs, who owned a large tract of land in Willistown. Cromwell Pearce was appointed May 6, 1777, Major, and May 20, 1779, Colonel of the 5th battalion of Chester county militia. The extent of his services is not known beyond the fact that he went on a tour of duty to Amboy, N. J. On May 1, 1781, he was commissioned Major of the second battalion of Chester county militia. After his father's death he became the owner of the farm in Willistown, whereon he passed the remainder of his days, and died August 4, 1794. His wife died December 28, 1818, aged seventy-eight years. Marmaduke Pearce, the father of Stewart Pearce, was the sixth son of Cromwell Pearce, and was born at Paoli, Willistown township, Chester county, Penn'a, August 18, 1776. He studied for the ministry and was licensed to preach in the year 1811. He was a man of attainments and sound practical sense, and met with much success in his chosen profession, which he pursued with untiring zeal until his death, Aug. 11, 1852. Three sons survived him, Rev. Cromwell Pearce, since dec'd, Stewart, the subject of this sketch, and Rev. John J. Pearce, of Lewistown, Penn'a.

The mother of Stewart Pearce was Hannah Stewart *nee* Jameson. She was a descendant of John Jameson, who, in the year 1704, left the highlands of Scotland and sought a new home in Ireland. He settled in the town of Omagh, in the county of Tyrone, and carried on the manufacture of linen. John Jameson, son of John Jameson, the elder, emigrated to America in 1718, and landed in Boston with two sons, William and Robert. In 1719 he removed to Voluntown, Windham county, Conn. Here he purchased and settled upon a large tract of land, and here he, his wife, and son William, who died unmarried, are buried. Robert Jameson was but four years old when his parents came to Amer-

ica. In 1747 he married Agnes Dixon, who was also born in Ireland, and came to this country when quite young, with her father, Robert Dixon. He was one of the committee of the Susquehanna Land Company. Robert Jameson and his father-in-law, Robert Dixon, were among the original petitioners to the Connecticut Legislature in 1753, asking for the organization of the Connecticut Susquehanna Land Company. Robert Jameson came to Wyoming in 1776. He died at Hanover, May 1, 1786, and was buried in the old grave-yard on Hanover Green. John Jameson, son of Robert, and grandfather of Stewart Pearce, preceded his father to Wyoming and arrived in 1772. He located himself on a tract of land in Hanover township, on the public road leading from Wilkes-Barré to Nanticoke. In 1776, he married Abigail, daughter of Major Prince Alden, who had emigrated to Wyoming and settled on the property lately owned by the late Col. Washington Lee, at Nanticoke. Major Alden was the third in descent from John Alden, who landed on Plymouth Rock, in 1620. In 1776 John Jameson enlisted in a company under Captain Strong, which served in the Continental army. He was also present in Plunkett's battle in December, 1775, at or near Nanticoke dam. He was in the battle and massacre of Wyoming, July 3, 1778, and barely escaped with his life. He was slain by the Indians July 8, 1782, while on his way, in company with a younger brother and a neighbor, from his home to Wilkes-Barré. Mrs. Hannah Pearce, the mother of Stewart Pearce, was born about two months after the death of her father, John Jameson. She married in 1779, James Stewart, son of Captain Lazarus Stewart. James Stewart died in 1808. In 1819 his widow married Rev. Marmaduke Pearce. She died in Wilkes-Barré, Oct. 21, 1859. Stewart Pearce was born in the village of Kingston, Luzerne county, Penn'a, Nov. 26, 1820. In 1834 he was sent to the Seminary at Cazenovia, N. Y., and in 1839, entered the Franklin Academy,

at Harford, Susquehanna county, Penn'a. In 1840 he commenced the study of the law, in the office of Samuel F. Headley, in Berwick, but soon thereafter his sight becoming impaired he gave up the law, and devoted his energies to the business of farming, on his father's farm in Columbia county. In the spring of 1846 he removed with his father to Berwick, and in the fall of the same year was elected a member of the House of Representatives of Pennsylvania. He was re-elected in 1847, and again in 1848. He was appointed collector of tolls on the Pennsylvania Canal & Railroad, at Columbia, Penn'a, but his health having failed he resigned the position in 1852. From 1855 until the time of his death he was a resident of Wilkes-Barré. During this period, his eyesight having further failed, he was unable to read; he could write, however, with a lead pencil. He was a charter member of the Wyoming Historical and Geological Society. Mr. Pearce was a Democrat in politics until 1856, when he joined the Republican party, and became one of its most active leaders in this county. He was chairman of the county committee of that party in 1863 and 1864, and during the late war was prominent as a writer for the newspapers, making public speeches and doing all in his power for the restoration of the Union. He was postmaster of Wilkes-Barré during General Grant's administration from 1869 to 1877. In 1860 he published his "Annals of Luzerne County; a Record of Interesting Events, Traditions and Anecdotes, from the First Settlement in Wyoming Valley to 1860." In 1866 he published a second edition with notes, corrections and valuable additions. This book, is a standard work, well written, and a valuable addition to the literature of the valley. Lyman C. Draper, LL. D., has justly called Mr. Pearce a "careful and conscientious historian." Mr. Pearce never married. He died in this city, Friday, October 13, 1882. In his will he bequeathed various sums to our home charities, such as the Wilkes-

Barré Hospital; Wilkes-Barré Home for Friendless Children; Wilkes-Barré Infants' Home; and the Luzerne County Bible Society. To our Society he gave his valuable historical library. He was a man of remarkable memory, ready wit, and keen, reasoning powers.

Of the historians of the valley, none brought to their work a greater zeal, or a more conscientious purpose to discover and record the truth.

ARNOLD HENRY GUYOT.

[Read before the Society, Feb. 11, 1885.]

Arnold Henry Guyot, LL. D., Blair Professor of Geology and Physical Geography, and senior professor of Princeton College, elected an honorary member of this society in 1859, born near Neufchâtel, in Switzerland, September 28, 1807, died at his residence in Princeton, N. J., February 8, 1884.

DANIEL STREBEIGH BENNET.

Daniel Strebeigh Bennet, an attorney at law of this city, and quartermaster of the third brigade of the National Guard of Pennsylvania, elected resident member of this society in 1880, born at Fairfield, near Williamsport, Penn'a, September 3, 1853, died at his residence in this city, September 16, 1884.

THOMPSON DERR.

Thompson Derr, a prominent man in insurance circles, and an insurance agent, was born in Durham township, Bucks county, Penn'a, January 16, 1834; was elected a resident member of this society in 1866, died in Wilkes-Barré, Penn'a, February 8, 1885.

J. L. RICHARDSON.

[Read before the Society, Feb. 11, 1886.]

J. L. Richardson, born in Vermont, September 15, 1816, died at Mt. Carmel, Pa., March 20, 1885; was seventh in descent from Amos Richardson, of Boston, 1645; (Amos¹, Stephen², Amos³, Nathan⁴, Nathan⁵, Willim P⁶). He was elected corresponding member of this Society in 1859. He was graduated at Lafayette College in the year 1839, and adopted the profession of teaching, which he pursued with much ability and success for many years. In 1855 he received the appointment of Superintendent of Schools of Luzerne county, and for five years discharged the duties of this office in a manner alike beneficial to the cause of education and creditable to himself. Subsequently he accepted the agency of the New York American Missionary Association, a society having for its object the improvement of the condition of the Freedmen; he organized many schools for this purpose, mainly in the Western States, and collected sufficient sums of money to insure their continuance and usefulness. Six years of his time were assiduously devoted to this undertaking. During all his life he was a conscientious and able advocate of the cause of temperance, and was untiring in his efforts in its behalf. He married Miss Catharine Heermans, of Scranton, June 19, 1846. Several children survive him.

FRANK TURNER.

Frank Turner, a resident member since 1881, was the son of John Turner, whose father, John, emigrated to the Wyoming Valley in 1780, from near Hackettstown, N. J., and settled in Plymouth, Penn'a. John Turner, the son, was born in Plymouth, July 13, 1787, and married in 1814 Jemima Inman, daughter of Col. Edward Inman, of Hanover township.

Frank Turner was born in Plymouth, April 22, 1832, and resided there all his life. For many years he was identified with the business interests and educational and municipal improvement of his native place. He died in Philadelphia, March 31, 1885. His wife and one son survive him.

WILLIAM FROTHINGHAM, M. D.

Dr. Frothingham, a corresponding member since 1859, was born in Johnstown, N. Y., in 1830. He was educated at Union College, and after his graduation began the study of medicine at the College of Physicians and Surgeons; he continued his studies at the schools of Paris during two years. At the beginning of the late civil war he received the appointment of surgeon of the 44th New York Volunteers, and subsequently became Chief Surgeon of Butterfield's brigade. After the expiration of his term of service he took up his residence in New York city and resumed the practice of his profession. He died in New York, Nov. 19, 1885. His wife and two daughters survive him.

THOMAS BRODRICK.

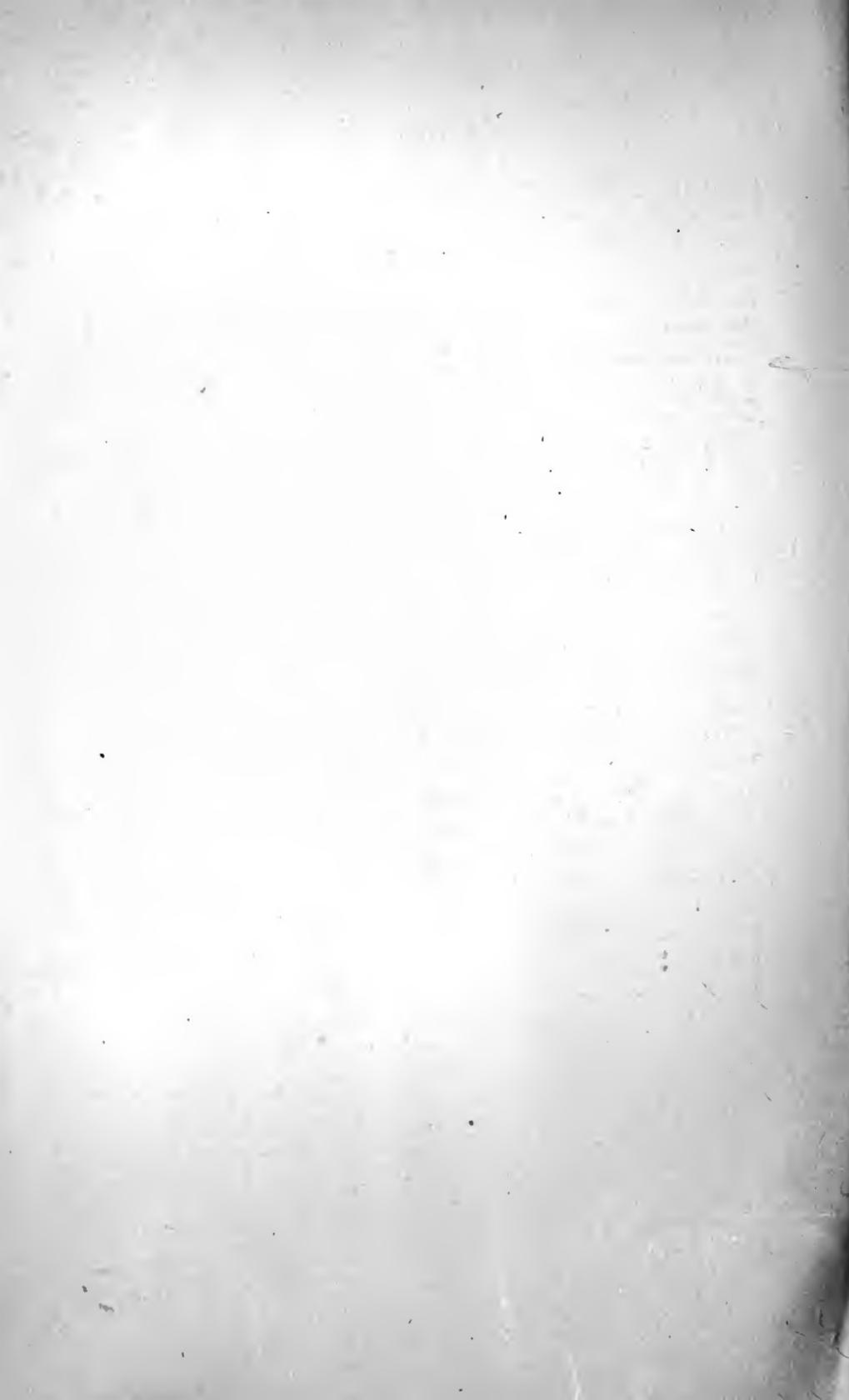
Thomas Brodrick, a resident member since 1860, was born in the city of Londonderry, Ireland, May 27, 1817. He was the eldest son of James and Elizabeth Brodrick, who came to this country in 1818, and settled in Northampton county, Penn'a. He obtained his early education at the Moravian school at Nazareth, Penn'a, and when still a youth became connected with the coal business, first at Mauch Chunk and later at Summit Hill. He came to Wyoming Valley in 1859, where he continued to reside until the time of his death, February 7, 1886.

Prior to 1876 he was for many years actively engaged in this region in the industry of coal mining, and was connected with most of the important mines in this vicinity.

either as superintendent, contractor, or lessee. His many years experience in this enterprise, together with an intelligent appreciation of the theory, and a knowledge of engineering and the science of geology, rendered him one of the most sagacious, skillful and expert miners of coal in the country.

He retired from business in 1876, and was in 1880 elected Mayor of Wilkes-Barré; in 1883 he was re-elected by a largely increased majority, and was a candidate for the third time, but died a few days before the election, having faithfully discharged the duties of his office for nearly six years. As chief executive of the city his administration of the affairs coming within his jurisdiction was satisfactory to the people and of much credit to himself. His business of mining had brought him into contact with a great number of employés who ever entertained for him a respect and friendship in appreciation of his worth and equitable dealings. He was an agreeable companion, a genial and kind-hearted man, and will long be held in affectionate remembrance by a wide circle of friends.

He was twice married; his first wife was Elizabeth Connor, of Mauch Chunk, by whom he had three daughters; his second wife was Elizabeth Furgeson, of Philadelphia, by whom he had one daughter. His wife and four daughters survive him.



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PROCEEDINGS AND COLLECTIONS

OF THE

WYOMING HISTORICAL AND GEOLOGICAL SOCIETY.



VOL. III.

Ms. A. 1. 128
18. m. fol. aged 2^{A.}

WILKES-BARRÉ, PA.:
PRINTED FOR THE SOCIETY.
1886.

92.

R. BAUR & SON, PRINTERS,
WILKES-BARRÉ, PA.

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PHILADA.

HARRISON WRIGHT.

In Memoriam.

HARRISON WRIGHT, A. M., PH. D.

LATE RECORDING SECRETARY OF THE
WYOMING HISTORICAL AND GEOLOGICAL SOCIETY, AND MEMBER OF
THE BOARD OF TRUSTEES.

*Nemo parum diu vixit, qui virtutis perfectae perfecto functus
est munere.—Cicero.*



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PUBLISHING COMMITTEE.

SHELDON REYNOLDS.

ANDREW H. McCLINTOCK.

PART I.



INTRODUCTORY NOTE.

At the meeting of the Wyoming Historical and Geological Society, held the 8th day of May, 1885, the President formally announced the death of Harrison Wright, late the Secretary and one of the Trustees of the Society. The regular order of business having been dispensed with, the Committee on Resolutions, previously appointed, presented a preamble and resolutions, which were duly adopted. Then followed the reading of a biographical essay by the Historiographer, and other papers commemorative of the life, character and work of our deceased friend. At the conclusion, on motion, the several essays and papers were referred to the Publishing Committee, with instructions to collate and publish the same, together with the expressions of such other societies and bodies as had taken action on the sad event. The Committee, having performed the duties assigned to it, herewith presents this memorial volume, which, it is hoped, may be deemed a not unfitting tribute to the virtues and character of one, who, by the purity of his life, his uniformly unselfish conduct, his sym-

pathetic and amiable disposition, and his genial and generous companionship, gained the respect and love of all who knew him; and whose thorough scholarship, united with an exceptional capacity for arduous application, gave promise of a most useful and brilliant future.

THE PUBLISHING COMMITTEE.

WILKES-BARRÉ, PA., 1886.

In Memoriam.

HARRISON WRIGHT, A. M., PH. D.

Died, February 20, A. D. 1885.



RESOLUTIONS.

[C. BEN JOHNSON, Esq., Chairman of the Committee on Resolutions, presented the following:]

Rich in epithet of affection and endearment as we esteem our English language to be, we find its possibilities but feeble and limited in the endeavor to express our sense of the loss of our dear companion and friend.

Harrison Wright is dead!

To those who knew him, as it was the privilege of the members of this society to know him, these words came a message so unexpected and startling that their full and sad significance could not be immediately realized.

Save only in those moments, which come to each of us, filled with the solemn reflection that one day all our spirits will be freed and all our poor, fragile bodies will return to that Mother Earth of whose dust they are molded, we had never associated Harrison Wright with the thought of death. Not only was he in outward semblance, in physical and mental energy and force of character endowed in a larger degree with what we call life than most men, but to us he was

always present as the heart of the life of this society. Many of us have been laborers in its ranks, and have given our time and attention towards its advancement in the cause of historical and scientific enlightenment. But what our occasional impulses of interest and activity to his constancy of devotion and tireless efforts! What our casual endeavors, who make of these studies a mere incident of our lives, to the thorough work and unstinted application of one to whom they were a continuous and absorbing pursuit! One who had become the Society's other self, who held no labor demanded of him too severe to be performed, no concession of time and means too great to be exacted, and whose only reward came in the assurance that thereby the purpose and the good name of the Society were subserved.

Harrison Wright returned in 1872, from Germany, where, at the University of Heidelberg, through careful application aided by inherited genius, he had gained high honors. Almost immediately afterwards he became the Recording Secretary of this society, and in that position he continued until the day of his death.

In addition to the duties of Recording Secretary he had undertaken the general supervision of the several departments of the Society. He applied himself to the determination of the specimens in the Mineralogical cabinet, to the classification of the Archæological,

Paleontological and Numismatic collections, to the accumulation and arrangement of the books and pamphlets in our Library, and to the preservation of the various manuscripts. To reach any degree of success in such diverse fields of study required not only unusual versatility of talent and breadth of culture, but also demanded the mental fitness and technical training necessary to supply the specific knowledge for the intelligent treatment of each separate branch.

Harrison Wright embodied every element of fitness for these several duties; a natural aptitude for each contingent study, tireless industry, compass for the most abstruse problems, and care for the minutest details, and an honorable and wholly unselfish ambition for leadership and excellence in almost every avenue of knowledge.

He mapped out the chief work of the Society in advance of each meeting and took a prominent part in all its discussions. He collated its records with special care, and was active in their preparation for publication. He continually added to and enriched our cabinets and collections from his own private resources. He read before the Society many original papers covering a diversity of topics, always treating his subject with marked talent, judgment, and critical insight. The many translations and annotations from the Ger-

man, French and Latin writers, which he from time to time presented, elucidating some subject bearing upon the work and discussions of the Society, proved his attainments as a linguist and his familiarity with the works of classical writers.

He employed a rare natural gift for enlisting the sympathies of others in the work of the Society, the effects of which were a revival of interest, an increase of membership, and an extension of the influence of the institution. And with it all he was a genial and lovable associate and friend; in his moral as in his mental habiliments a truly representative scion of worthy parents and an honorable ancestry; piously dutiful to every obligation of manhood; and as a citizen one of those whose purity, charity and patriotism of thought and deed are the chief elements in making republics great and grateful.

In feeble but heartfelt tribute to the virtues and capacities thus imperfectly detailed, it is hereby

Resolved, That in the death of Harrison Wright, for more than twelve years the Secretary and most active member, this society has sustained a loss beyond computation or adequate expression. The place he left vacant can be supplied, as can be all voids of death's making, but never filled as he filled it. It is as though a main artery in the life system of the Society had been ruptured; we can stanch the dangerous flow and

bind up the wound, but we cannot be blind to the damage, and we would not hide the pain. We yield because we must. We avoid dispute with fate because it is not given us to comprehend the Divine reasoning upon which its decrees are registered.

BIOGRAPHICAL SKETCH.

[Read by GEORGE B. KULP, Esq., Historiographer.]

“ Yea, hope and despondency, pleasure and pain,
We mingle together in sunshine and rain;
And the smiles and the tears, the songs and the dirge,
Still follow each other like surge upon surge.”

At the last regular meeting of this organization Harrison Wright sat with us, to all outward appearances in the full bloom of perfect health. His unselfishly ambitious love for the pursuits coming within the scope of this organization, making it impossible for us, during years past, to think of the organization without thinking of him as its most ardent friend and principal sustainer, was apparent in almost everything done at that meeting and noted in the minutes of its proceedings which have just been read to us. He was then as hopeful and enthusiastic as he was active and energetic. In every project the Society looked to him, often for leadership, always for generous and important assistance. His natural talent for historical research, perfected by most careful cultivation, was in demand to elucidate the numerous subjects, in the examination and exposition of which this society zealously aims to be a careful

student and intelligent teacher. We were with him then, and depending upon him then, as we had been with him and dependent upon him a hundred times before, and as we fondly hoped and expected to be with him and to depend upon him hundreds of times again. Yet in less than a fortnight he had been summoned to that other world, of which the highest knowledge attainable in this leaves us in darkness penetrable only by the light of the lamp of resignation and faith. It is generally understood that the illness, which resulted in his death, was caused by the insidious draughts of raw, damp air that found their way into the museum of this society at a time when he was engaged in gathering some details for a report upon its status, which report was his last official communication to us. If anything could, this fact would add to the gratefulness in which we hold his memory as one whose devotion to our society's interests was without a selfish thought, whose services rendered in its behalf were beyond computation in value and who was truly one of the chief pillars of its strength.

Harrison Wright was born in this city, July 15, 1850, and was, therefore, at the time of his death, February 20, 1885, not quite 35 years of age. That he was enabled in so short a life-time to accomplish so much, seems at first glance as surprising, as it is that a

man so full of usefulness and promise should have been called away, when there are so many others the world could much better have spared. That he inherited at least a part of his peculiar enthusiasm and fitness for the work in which he engaged, is a conclusion which must force itself upon even those who have least faith in such inheritance, after they shall have informed themselves somewhat of the ancestry from which he sprung. That ancestry identifies the blood which flowed in his veins with that of the moving spirits in the earliest history of our city, county and State; in the primary and progressive developments of the vast mineral resources of this particular section of our great commonwealth; in the grandest unfolding of the sciences and arts in this country, and in various important scientific and patriotic undertakings in other countries.

There is nothing particularly original in the manner of the presentation of the interesting facts which, in the performance of my duty as the Historiographer of this society, I here follow—the work of compiling them having been well advanced by Harrison Wright himself.*

*A portion of the following pages, especially the several biographical sketches, I have taken from an unpublished work of Dr. Wright, entitled, "A Genealogical and Biographical Record of John Jacob Weiss," and inserted without alteration or addition.

Harrison Wright was the descendant in the sixth generation of John Wright, one of the first settlers of Burlington county, New Jersey, and who was the first settler at Wrightstown, in that county, being in fact the founder of the village or little town of that name. He came from England in 1681 with William Penn's colony of Quaker immigrants. He held a commission of justice of the peace and captain of the militia under the royal seal of Charles II. A diary kept by this pioneer is still in the possession of the family. Among other things therein recorded it appears that "he subscribed and paid £3 towards building the brick meeting-house." This building is still standing, after a lapse of two hundred years, and was probably the first meeting-house erected in that state. It appears also that he "made the first barrel of cider in the State of New Jersey." The circumstances attending the jubilee over this "first barrel of cider" I must insert. It was an event in the history of the new country. "He invited all his neighbors to partake; they very willingly attended. Duke Fort was appointed tapster, and a merrier assemblage never took place in the neighborhood of Penny Hill, for so Wrightstown was then called." Among the curiosities contained in this old diary I add the following: "The soil is very productive and the earth yields very bountifully, but then, the farmer has poor encourage-

ment, considering that those terrible pests, the wild geese and wild turkeys, destroy almost entirely one's crops."

The wife of John Wright was Abigail Crispin, daughter of Silas Crispin, the elder. After the grant of Pennsylvania to William Penn, Silas Crispin was appointed Surveyor General, and sailed with William Crispin, his father, John Beryar and Christopher Allen, who were appointed commissioners to go to Pennsylvania with power to purchase lands of the Indians and to select a site for and lay out a great city; but, dying on the voyage, Captain Thomas Holmes was appointed his successor, April 18, 1682. He was a native of Waterford, Ireland, and is said to have served in the fleet under Admiral Penn in the West Indies when a young man. He sailed from the Downs, April 23, accompanied by two sons and two daughters, Silas Crispin, the son of his predecessor in office, and John, the eldest son of James Claypole. Thomas Holmes made his home in Philadelphia, and owned land in Bristol township, Bucks county, Pa., but it is not known that he ever lived there. His daughter Hester married Silas Crispin, who came to America with him. These were the parents of Mrs. Wright. The mother of Silas Crispin, the elder, was a sister of Margaret Jasper, the mother of William Penn, which made him the first cousin of the founder.

Samuel Wright, son of John Wright, was born at Wrightstown in 1719 and died in 1781. His wife was Elizabeth Haines, daughter of Caleb Haines, of Evesham.

Caleb Wright, son of Samuel Wright, was born at Wrightstown, Jan'y 14, 1754. He married Catharine, daughter of John Gardner, in 1779, and removed with his family to the "Susquehanna country" in 1795. He purchased and settled upon a farm in Union township, Luzerne county, Pa., two miles above Shickshinny, where he remained till 1811 and then returned to New Jersey. Mr. and Mrs. Wright lived to a good old age after their removal to New Jersey and their remains are interred at the Friends' burial-ground at East Branch, Upper Freehold, Monmouth county, N. J.

Joseph Wright, son of Caleb Wright, was but a boy of ten years when his father removed from Wrightstown to the Susquehanna country. Previous to the return of his father to New Jersey he had married, and established a small retail store in Plymouth, and he alone of the family remained in our county. He was a resident of the town of Plymouth for more than half a century, and during that long period was intimately connected with its municipal government and was one of its representative men. He was the second person in the mercantile business in Old Plymouth. He, however, continued but a short time in this occu-

pation, afterwards devoting his attention to the interests of his farm. His ancestors for two hundred years had belonged to the Society of Friends; he steadily adhered to the faith of this religious order of people to the hour of his death. Notwithstanding he had been expelled from the society, because he had married outside of the church limits and in direct violation of its discipline, he ever considered himself as one of the order, however, and bound by its formulas and creed. It is, however, somewhat difficult to reconcile his professed religious obligations in view of his conduct in entering the service in the war of 1812. We find him in Captain Halleck's company of Pennsylvania militia on the march for the defense of Baltimore. Patriotism had triumphed over sectarian fealty, the tri-colored cockade usurped the broad-brim. The regiment, however, never saw active service.

Mr. Wright married, June 15, 1807, Ellen Hendrick, widow of Moses Wadham, deceased. She was the daughter of John Hendrick, who was a descendant in the fourth generation of Daniel Hendrick (who was of Haverhill in 1645, and had been of Hampton in 1639) and Dorothy Pike, daughter of John Pike, of Newbury, in 1635. Joseph Wright had three sons. Hendrick Bradley Wright, his eldest, was a very prominent lawyer at the Luzerne bar. He represented Luzerne county in the lower house of the State Legislature in

the years 1841, 1842, 1843, and the latter year was speaker of that body. In 1844 he was president of the Democratic National Convention which nominated James K. Polk for the presidency. In 1852, 1853, 1861, 1862, 1863, 1876, 1877, 1878 and 1879, he represented Luzerne county in the National Congress. He was the author of "A Practical Treatise on Labor" and "Historical Sketches of Plymouth," his native town. He died in Wilkes-Barré, September 2, 1881. Caleb Earl Wright, the second son of Joseph Wright, is still living and resides at Doylestown, Pa. He is also a prominent lawyer. He was president of the first borough council of Doylestown, district-attorney of Bucks county, and while a resident of Luzerne county, held the office of collector of internal revenue under President Johnson, and was a member of the Pennsylvania Constitutional Convention of 1874. He is also an ordained minister of the Methodist Episcopal Church, and is the author of a novel under the title of "Wyoming," from the press of Harper Brothers, and a romance under the title of "Marcus Blair," published by J. B. Lippincott & Co. The third and youngest son of Joseph Wright was Harrison Wright, the father of the subject of our sketch. He was born at Plymouth, January 24, A. D. 1815. Perhaps no better estimate of his character can be given than that found in the proceedings of a meet-

ing of the bar of this county held immediately after his death. At this meeting the late John N. Conyngham was president, E. L. Dana secretary, and Warren J. Woodward chairman of the committee on resolutions, who reported as follows: "We are summoned to this meeting under circumstances of most painful interest. We are met to render our professional tribute to the memory of Harrison Wright. Death within a few years past has made sad havoc in our ranks. Recently, and at brief intervals, we have been required to record the successive loss of Chester Butler, Luther Kidder and Horatio W. Nicholson. They were stricken down in the very prime of their usefulness and in the very summer of their years. The grasp of the common destiny of us all was unrelentingly and unrelaxingly fastened upon them in the midst of the strongest ties to life—in the enjoyment of high social and professional position—of the public confidence and regard—of the reputation that results from high office and great wealth. But in no instance has the blow fallen so severely upon us as it has fallen now. Mr. Wright has been constantly among us—with the exception of a few months passed in the Legislature during the year 1855, he has devoted himself during almost twenty years to the practice of the law. Almost every man who is gathered here, from the very day of his admission into the profession, has been habituated to

his presence in our courts. We have all been under obligations to him for assistance and advice, most readily and most gratefully rendered. We have felt deep obligations to him for the kindly spirit which has characterized the intercourse of the members of the bar, and which in a great measure was created by his counsel and example. It is due to his reputation, as well as to ourselves, that regret for his early death and respect for his memory and sympathy for his surviving family should be expressed by the members of that profession which he loved and honored and illustrated and adorned throughout his life. Mr. Wright was a thorough lawyer; deeply imbued with the profound principles which form the fountains of our legal system, he kept himself constantly familiar with the current exposition of those principles by the court. His acquaintance with the details and forms of business was most accurate and minute. In his whole heavy and long-continued practice he was, in every case, untiring, indubitable and indefatigable. In the preparation and trial of causes he was laborious, wary, methodical, accurate and prompt. And he was a most accomplished advocate. In all the long history of our old court-house its walls have resounded to no eloquence more attractive or more effective than his. An entire generation of the people of our whole county must pass away before the memory of his fine person,

his impressive manners and his prompt tones shall be forgotten. In the varied and growing business interests of the community the premature death of Mr. Wright will be severely felt. Born and bred in the Wyoming valley, his sympathies and his heart were here. To promote the prosperity of the county of Luzerne his time and his purse were always given. In the very best and most enlarged sense of the phrase he was a man of public spirit. In the improvements made and progress around us the mark of his hand and intellect is everywhere visible. To the erection of our churches; to the schemes for the development of our mineral resources; to the organization of our gas company; to the measures requisite to secure the completion of the North Branch canal; to the efforts to extend to this county the general mining law, productive as this has been of such wonderful results; to the establishment of our law library; to every feasible scheme for the advancement of the material interests of our community, his influence and liberality have been ungrudgingly and effectively extended. He was a peculiarly unselfish man. And he threw into every effort for the public good, as he threw into every professional struggle in which his sympathies were aroused, all the astonishing vigor, energy and enthusiasm of his character, regardless of individual results for himself. It was a peculiarity of Mr. Wright's position that he

numbered among the members of the profession an unusually large proportion of personal friends. His relations with many members of the bar were of the most intimate and confidential kind. With almost all of them these relations were marked by uniform courtesy and cordiality. He was a true, faithful, reliable and active friend, and no considerations of personal interest or personal ease ever induced him to abandon the man whom he had promised to serve or who held a claim for his service. In every relation of life Mr. Wright had upright and single aims. He was a resolute man. He pursued boldly and unflinchingly the path of duty open before him. And with his extraordinary abilities, his attractive and impressive manners; his clear, quick, sound judgment; the unbounded confidence of the community in his honor, integrity and faith; his steadiness of nerve and his strength of purpose, he wielded an influence upon systems and events around him almost without parallel or example. For reasons thus hastily and imperfectly sketched, we do

"Resolve, That we have learned the fact of the death of Harrison Wright, Esq., on August 25, 1856, with feelings of deep and abiding regret. His loss will be felt as an individual grief by each one of us, connected as we have been with him in relations of intimate, social and professional intercourse, but we bow in

submission to that Power that ‘doeth all things well.’ That we most cordially recognize the varied claims which Mr. Wright in his life-time established upon our esteem, respect and gratitude; for his courtesy and kindness of heart; for his strict honor and manliness of character; for his great abilities, his learning and his eloquence; for his abiding love of his profession; for his laborious performance of every duty of an active and useful life, and for his unselfish devotion to the public good, we will cherish his memory while our own lives shall last.”

Thus was the character of Mr. Wright portrayed by those who had the most intimate relations with him and who knew him best.

The wife of Harrison Wright, senior, and the mother of the subject of our sketch, was Emily Cist, daughter of Jacob Cist and a descendant of Charles Cist, who was the son of a well-to-do German merchant, who had been attracted to St. Petersburg, Russia, at the beginning of the eighteenth century by the liberal inducements offered to foreigners by Peter the Great, and who there met and married Anna Maria Thomassen. Their second child, Charles Cist, was born in St. Petersburg, on August 15, 1738, and was baptized on the 21st of the same month in the Evangelical Lutheran Church of St. Peter, in that city. At a very early age he showed such a fondness for and application to his

studies that his father gave him every advantage which the schools of St. Petersburg at that period afforded, and already on April 23, 1755, at the age of 16, we find him matriculated as *studiosus medicinæ* at the University of Halle, on the Saale, one of the leading universities of Germany. Owing to the incompleteness of the records of the medical faculty of the university at that time, it is impossible to state now how long he remained there or whether or not he took a degree, though it is likely he did take the latter, as he was later a practicing physician in St. Petersburg and had there a large apothecary and drug business. The liberal policy adopted by the far-seeing Peter towards professional and scientific men, as well as to the foreign merchants located in Russia, insured protection to Charles Cist in the early days of Catharine; and the income of his business enabled him to amass considerable property and to collect the finest cabinet of minerals in the city of St. Petersburg, and one whose rarities the highest dignitary of the church thought worthy of a Sunday visit to examine. But when his success was at its highest a change came. Filled with liberal ideas too far advanced to be tolerated in despotic Russia, he joined with others in a proposed revolution which, being discovered by the authorities, was suppressed, his property confiscated and he, in 1767, an exile at Omsk, in Siberia, from whence he

escaped and fled, a political refugee, to the hospitable shores of America, arriving in Philadelphia, in the ship Crawford, on October 25, 1773. Directly after his arrival he met Henry Miller, who was at that time publishing a German paper in Philadelphia, entitled *Pennsylvanischer Staatsbote*, and who, desiring some competent person to translate articles from English exchanges into German for the *Staatsbote*, offered the position to Charles Cist until he should become acquainted in Philadelphia and acquire enough money to start in his regular business. The offer was accepted and the printing business pleased him so well that he remained for two years with Miller, and in December, 1775, entered into copartnership with Melchior Styner, who had been Miller's foreman, and they established a printing-office of their own. At the beginning of our revolutionary troubles this firm published a newspaper in the German language, but not receiving the necessary support and encouragement it was discontinued in April, 1776. Many pamphlets on the critical questions of those disturbed times were issued from the press of Styner & Cist, among others Thomas Paine's "American Crisis." During the war Styner and Cist were both enrolled as members of the Third Battalion of Pennsylvania militia, and on June 20, 1777, Charles Cist took the voluntary oath of allegiance and fidelity. Upon returning to Philadelphia after the

evacuation of the British, the firm continued the printing business, and in the year 1779, besides publishing "Regulations for the Order and Discipline of the Troops of the United States" and a number of other pamphlets, they again commenced the publication of a German newspaper. In 1781 the copartnership after existing for nearly six years—years most eventful in the history of this country—was by consent dissolved. Henry Miller, instead of discouraging the formation of this firm, seems to have aided and assisted in every way; and in after years when Cist had gained a competency and Styner was still struggling along, Henry Miller died and left the fortune, or a large part of it, which he had accumulated during a busy life, to Styner. In 1784 Charles Cist, together with Seddon, John O'Connor, and others, started an English newspaper entitled *The American Herald and General Advertiser*, but for want of encouragement it was discontinued; and at a meeting of the proprietors, held July 3, 1784, it was resolved that the publication of the paper should cease and the subscription money be refunded to the subscribers. On October 1, 1789, Charles Cist, together with Seddon, William Spotswood, James Trenchard and the well-known Matthew Carey, started the *Columbian Magazine*, a monthly miscellany, with the year 1789. Trenchard became the sole proprietor, and the subsequent numbers were

published by him alone. Mr. Cist published between the years 1781-1805 a large number of religious, political and educational works in at least four languages, among which in German in the year 1783 was "Wahrheit und guter Rath an die Einwohner Deutschlands, besonders in Hessen," and in 1789, "Der amerikanische Stadt und Land Kalender;" and continued in the three-fold capacity of printer, publisher and bookseller until his death in 1805. In this latter year he published, among other works, a reprint of Rev. Andrew Fuller's, "The Gospel its own Witness." Mr. Cist was a member of the German Society of Pennsylvania; in 1782 was a member of the school committee, and in 1795 secretary of the association. He was also the secretary of the — — Fire Insurance Company of Philadelphia, and announces in May, 1793, that this company had procured an apparatus to save people from burning houses; it consisted in an elevated basket. Under the administration of the elder Adams he received the contract for printing official documents. In the year 1800 he went to Washington and arranged at great expense a printing-office and book-bindery, purchased real estate, built several houses and believed he had a good, remunerative position, but it was not long after the victory of the Democratic party in 1801 that he lost his privileges and returned to Philadelphia poorer than

when he left. In writing to his son Jacob in regard to his losses in Washington, under date of February 7, 1803, he says: "Misfortunes follow one upon another and bear the more severely upon me at my time of life when I, in a manner, must begin the world anew. But I trust in Providence, and the conscience of the rectitude of my actions supports me under the complicated evils that the loss of my place has brought upon me. Heaven forgive my enemies, they have done me more harm than they intended." In a back room of his printing-office he had arranged a small laboratory to which it was his delight to withdraw, when business permitted, to experiment with chemicals. Here he discovered and patented colors for dyeing from the quercitron bark; he manufactured on a small scale cakes of water-color paints, and prepared, by grinding, paints for oil painters. It was here, too, that he tested the "black stone" discovered on the Lehigh by Philip Ginter and taken to Philadelphia by Colonel Weiss, and which he pronounced to be anthracite coal. He was one of the founders and largest stockholders of the "Lehigh Coal Mine Company," which was founded in 1792. He died of apoplexy while on a visit to his brother-in-law, Colonel Weiss, at Fort Allen, on December 1, 1805, and lies buried in the Moravian burial-ground, at Bethlehem. He was sanguine in his disposition, punctual and of most rigid

integrity in his business relations, courtly in his manners, and yet of most modest demeanor, which recommended him to all classes with whom he came in contact. He was unassuming and unpretentious, and yet his university education and his knowledge of the literature of several languages rendered him welcome among the savants of the then metropolis of the new world. The purity and simplicity of his character was at all times a source of admiration with those who knew him, and when his trials and losses came he had the sympathy of every one; even some of those who were the cause of them afterwards repented of the action which they had taken and tried to retrieve it by kindness to his son while he was in Washington. A brother and two sisters residing in Russia survived him, all of whom were married, and their descendants are to-day scattered throughout the length and breadth of Russia. He married, June 7, 1781, Mary, daughter of John Jacob and Rebecca Weiss, who was born in Philadelphia, June 22, 1762, and had eight children, all of whom were living at the time of his death.

The father of Mrs. Charles Cist, John Jacob Weiss, was born in the village of Wahlheim, near Bietigheim, in the kingdom of Würtemberg, Germany, on July 20, 1721. His parents were John Jacob and Mary Elizabeth Weiss. He was confirmed in the Lutheran Church of his native village in 1736, and in 1740

emigrated to America, landing in Philadelphia in September of that year. On the 24th of October, 1746, he married Rebecca Cox, of Swedish descent. She was born November 23, 1725, in Passyunk township, now in Philadelphia, and reared in the Lutheran religion. Her father, Peter Cox, who died in January, 1751, aged 63 years, was the grandson of Peter Lawson Koch, who came from Sweden in 1641 with the third Swedish colony, and settled upon the Delaware. On January 8, 1749, when the United Brethren were favored with a particularly blessed day, the occasion being a visit of Brother John (Bishop Spangenberg) and others, John Jacob Weiss and his wife Rebecca were received into the Brethren's association and admitted to the holy communion. In the month of June, 1750, he purchased a hundred acres of land in Long valley, in the present county of Monroe, partly on Head's creek. He took the oath of allegiance to George II. April 12, 1750, before Chief Justice Allen, and to the United States, July 2, 1778. Mr. Weiss was a surgeon, and had his place of business for many years on Second street, Philadelphia. He died September 22, 1788, and was buried next day in the Moravian burial-ground in Philadelphia. His wife Rebecca died July 3, 1808. The old Moravian record says: "She was a communicant of our church and a simple, genuine follower of the Lord." Mr. and Mrs.

Weiss had eleven children, of whom Mary, the tenth child, became the wife of Charles Cist. She was born in Philadelphia, June 22, 1762, and was baptized the 25th of the same month by Rev. George Neisser.

It may not be out of place in this sketch of our late associate, to portray the character of Col. Jacob Weiss, the brother of Mary Cist. He was born in Philadelphia, September 1, 1750, and after the commencement of hostilities between the mother country and the Colonies he entered the Continental service in the first company of Philadelphia volunteers, commanded by Captain Cadwalader, and after having performed a tour of duty, he was at the earnest recommendation of General Mifflin, then Acting Quartermaster General, to whom he had served an apprenticeship in the mercantile line, and who knew him to be a trusty and proficient accountant, appointed a Deputy Quartermaster General under him, and subsequently under General Green, in which station he remained until General Green took command of the Southern army, October 30, 1780; the admirable arrangement of the Quartermaster General's department and the able management of General Green, enabled the army to move with facility and dispatch. The means possessed by the commissary's department were inadequate to supply the army's wants and frequently caused great distress; and often rendered its condition deplorable.

The financial embarrassment which followed upon the rapid depreciation of the Continental money, was a greater bane to the cause of the patriots and a more insidious enemy than the powerful foe which confronted them. Prices rose as money sunk in value. The commissaries found it extremely difficult to purchase supplies for the army, for the people refused to exchange their articles for the almost worthless paper. At the close of the year 1779, thirty dollars in paper was only equal in purchasing value to one of specie. After the defeat of the American army in the battle of Brandywine, September 11, 1777, the road to Philadelphia was open to the enemy. There was great consternation among the people when they heard of the approach of the British army. Mrs. Weiss frequently spoke of the excitement that followed; every one tried to get away, fabulous prices were paid for all kinds of conveyances. Her husband was with the army and she was left to her own resources. She was fortunate in procuring a conveyance, and taking with her the wearing apparel of the family and a few household articles, started with her family for Bristol. Upon her arrival there, she found the hotel used as a hospital for the wounded soldiers. The sight of these greatly distressed her, as she said it was the most sickening sight she ever beheld. In the following month Colonel Weiss sent his family to

Easton. During those perilous times he was almost constantly attached to, and followed the various, and often sudden movements of the main army, which proved a very harassing and arduous service. By the advice of General Green, who in his farewell letter to him, highly and affectionately commended him for the faithful performance of the various duties imposed upon him, he accepted the appointment of Assistant Deputy Quartermaster General, at Easton, for the county of Northampton, in the fall of 1780, in which capacity he served until the close of the war. In June, 1780, Colonel Weiss moved his family from Easton to Nazareth. After closing up the business of his department in 1783, he retired from the public service, and purchased a tract of land on the Lehigh river, north of the Blue mountain, including the broad flats, upon which is located the town of Weissport, Lehigh county, Pa. This was the site selected by the Moravian missionaries in 1754, for their mission, when the land on the Mahoning became impoverished. Here they erected dwellings for their Indian converts, and built a new chapel. To this wild and secluded spot he brought his family in the spring of 1786. The inhabitants were few, and simple in their habits, unburdened by the restraints and conventionalities of modern life. Nor had they need of many of the things, we now

consider necessary to our health and comfort. An umbrella was considered a great novelty, and Mrs. Weiss at first attracted some attention by carrying one on a rainy day. The Colonel's residence was built near the site upon which Fort Allen (named in honor of Chief Justice Allen) formerly stood. "It was in the beginning of the month of January, 1756," writes Dr. Franklin, "when we set out upon this business of building forts. The Indians had burned Gnadenhütten, a village settled by the Moravians, and massacred the inhabitants; but the place was thought a good situation for one of the forts. Our first work was to bury more effectually the dead we found there. The next morning our fort was planned and marked out, the circumference measuring four hundred and fifty-five feet, which would require as many palisades to be made, one with another, of a foot in diameter each. Each piece made three palisades of eighteen feet long, pointed at one end. When they were set up, our carpenters built a platform of boards all around within, about six feet high, for the men to stand on when they fired through the loop-holes. We had one swivel-gun, which we mounted on one of the angles and fired it as soon as fixed, to let the Indians know, if any were within hearing, that we had such pieces, and thus our fort (if that name may be given to so miserable a

stockade,) was finished within a week, though it rained so hard every other day, that the men could not well work." Within the enclosure around the Colonel's house, was the well, which was dug inside the fort by Franklin's direction, and long remained as a memorial of the old Indian war, and also testified to what "Poor Richard" knew about digging wells. It continued to furnish an abundant supply of pure water, until it was destroyed by the devastating flood, which swept through the valley of the Lehigh in 1862. The bell of the old Moravian chapel, was found near this well by one of the workmen, while digging a post-hole. Under the energetic management of Col. Weiss, the flats around his dwelling, and the adjacent hills were rapidly cleared up and cultivated, while the surrounding forests furnished an abundant supply of lumber for his mills. To protect the soil from floods, a fringe of trees was left along the bank of the river, and the Lombardy poplar was planted along the roads and around his dwelling to furnish shade. While thus engaged in transforming the wild glens of the Lehigh into fertile fields and changing these savage haunts into the peaceful abodes of civilized life, he probably realized that "peace as well as war has its victories." About this time he was also engaged in business with Judge Hollenback, trading under the firm name of Weiss & Hollenback.

This partnership commenced as early as 1785 and continued as late as 1788. In the year 1791 an event occurred, in itself apparently trifling, but fraught with momentous results to the future interests of this section of country. This was the discovery of coal in the Lehigh district. The story of its discovery is doubtless familiar to many. Nevertheless, as Col. Weiss was prominently connected with its discovery and first introduction to the public, a brief reference to the same may not be amiss. A hunter of the name of Philip Ginter had taken up his residence in that district of country. He built himself a rough cabin and supported his family by hunting in the dense and primitive forests, abounding in game. On the occasion to which we are now referring, Ginter had spent the whole day in the woods without meeting with the least success. As the shades of evening gathered around he found himself on the summit of Sharp mountain, several miles distant from home; night was rapidly approaching and a storm of rain was advancing, which caused him to quicken his pace. As he bent his course homeward through the woods, he stumbled over the root of a tree, which had recently fallen. Among the black dirt, turned up by the roots, he discovered pieces of black stone. He had heard persons speak of stone-coal as existing in these mountains, and concluding that this might be a portion of that stone-coal, of

which he had heard, he took a specimen with him to his cabin, and the next day carried it to Col. Jacob Weiss. The Colonel, who was alive to the subject, took the specimen with him to Philadelphia and submitted it to the inspection of John Nicholson and Michael Hillegas, and also to Charles Cist, an intelligent printer and the brother-in-law of Col. Weiss, who ascertained its nature and qualities, and told the Colonel to pay Ginter for his discovery upon his pointing out the place where he found the coal. This was readily done by acceding to Ginter's proposal of getting, through the regular forms of the land office, the title for a small tract of land on which there was a mill-site, and which he supposed had never been taken up, and of which he was unhappily deprived by the claim of a prior survey. Messrs. Hillegas, Cist, Weiss, Henry and some others soon after formed themselves into what was called the Lehigh Coal Mine Company, but without a charter of incorporation, and took up about 10,000 acres of till then unlocated land, which included the opening at Summit hill and embracing about five-sixths of the coal lands of the Lehigh Coal and Navigation Company. The Coal Mine Company proceeded to open the mines; they found coal in abundance, but like the man who caught the elephant, they hardly knew what to do with it. Between the coal mine and the distant market lay a

vast expanse of wild and rugged mountains and valleys. The Lehigh river in season of low water, in its then unimproved state, almost defied the floating of a canoe over its rocky bed. There was an abundance of wood at low prices and no demand for stone coal. A rough road, however, was constructed from the mines to the Lehigh, about nine miles in length. After many fruitless attempts to get coal to market by this road and the Lehigh river, the Lehigh Coal Mine Company became tired of the experiment and suffered their property to lie idle for many years. But Col. Weiss, notwithstanding the inauspicious outlook, determined that the coal should at least be introduced to the acquaintance of the public. He filled his saddle-bags from time to time and rode around among the blacksmiths in the lower counties, earnestly soliciting them to try it. A few accepted the proffered supplies and used it with partial success. The rest threw it aside as soon as the Colonel was out of sight, quietly remarking that they thought he must be getting crazy. William Henry, then engaged in manufacturing muskets under a contract from Governor Mifflin of Pennsylvania, employed a blacksmith residing in Nazareth, and prevailed upon him to try to make use of this coal, but after three or four days' trial, altering his fireplace frequently, but all to no purpose, became impatient and in a passion threw all

the coal he had in his shop into the street, telling Mr. Henry that everybody was laughing at him for being such a fool as to try to make stones burn, and that they said Mr. Henry was a bigger fool to bring those stones to Nazareth. The Coal Mine Company, desiring to render their property available, granted very favorable leases to several parties successively, only to have them abandoned in turn when the difficulties and losses of the enterprise became manifest. The project was allowed to rest until the Lehigh Coal and Navigation Company, by building dams and sluices and otherwise improving the navigation of the Lehigh, and constructing a good road between the mine and river, succeeded in sending coal to the Philadelphia market in sufficient quantities and at prices which at length attracted the attention of the public. In the year 1820 three hundred and sixty-five tons of coal were sent to market. This quantity of coal completely stocked the market, and was with difficulty disposed of. Col. Weiss, having had the misfortune to be deprived of his eyesight for about twenty years before his death, and later becoming extremely deaf, which misfortune, he bore with exemplary resignation, did not enjoy seeing and being fully apprised of the fruits of his labor and ardent desires. He was a man of liberal education, strong minded, remarkable memory and generous disposition, esteemed and respected by

all who knew him. He died at Weissport, January 9, 1839. Nearly three score years have passed away since he was compelled, by reason of advancing age and failing eyesight, to relinquish the active duties of life. How marvelous the results which have since taken place in the growth of that enterprise of which he was the pioneer!

Jacob Cist, eldest son of Charles and Mary Cist, was born in Philadelphia, on March 13, 1782. On the 5th of September, 1794, when only a little over 12 years of age, his father sent him to the Moravian boarding-school, at Nazareth, in Northampton county, Pennsylvania, where he remained three years, leaving on the 10th of June, 1797, after completing the established course of study at that time required, which, besides a thorough study of all the ordinary English branches, included a knowledge of Greek, Latin, German and French.

His love for, and talent of, easily acquiring languages, he seems to have inherited from his father, who was an accomplished and enthusiastic linguist, and the knowledge derived from a three years' course under competent teachers, was the groundwork upon which he perfected himself in after years.

Here, too, under the old French drawing-master, M. A. Benade, he acquired a considerable knowledge

of drawing and painting. He was particularly happy in catching a likeness.

On his return to Philadelphia in 1797, he assisted his father in the printing-office, devoting his spare hours to study, and in the year 1800, when his father purchased property in Washington city and erected a printing-office there, he went to that place to take charge of the office. Upon his father's relinquishing the business in Washington he determined to locate there, and applying for a clerkship secured one in the Postoffice Department, which he retained from the fall of 1800 until he removed to Wilkes-Barré, Pennsylvania, in the year 1808. So well satisfied were Mr. Granger and his successors with the capabilities of Mr. Cist that upon his arrival in this city he was appointed postmaster, which office he retained until his death in 1825, thus having been for a quarter of a century in the employ of the Postoffice Department. His father, writing to him in 1802, says: "As it is "to your good conduct in the Federal city that I "chiefly ascribe the confidence the Postmaster Gen- "eral places in you and the kindness he shows in pro- "curing you an advantageous post, I cannot refrain "of recommending you the same conduct in your "future stages of life as the surest means of forward- "ing yourself in the world with credit and reputation." His spare time in Washington he appears to

have devoted principally to painting and literature. He has left a good picture of Mr. Jefferson and an admirable copy of Gilbert Stuart's portrait of Mrs. Madison, which she permitted him to paint, and a number of miniatures. Being obliged to mix his own paints, and not finding a mill to suit, he invented one and patented it in the year 1803.

He was a contributor to *The Literary Magazine* as early as 1804, and to Charles Miner's paper in Wilkes-Barré. Mr. Miner writes, under date of Nov. 28, 1805: "I am charmed with your piece on 'Morning.' " It possesses all the life, spirit and variety of that "charming season," and Dec. 26, 1806: "Your 'Noon' is in type. If you are but a young courtier "at the shrine of the muses, you have been unusually "fortunate in obtaining their approbation;" and Feb. 19, 1807: "Your last letter containing your 'Night' "was very welcome. The description is truly natural "and elegant, and its only fault was its shortness. I "hope you will often favor me with your poetic effu- "sions or prosaic lucubrations," and at other times he writes: "Your four pieces on Morning, Noon, Even- "ing and Night have been warmly commended by a "literary friend in Philadelphia." Again: "From the "friendship shown you by the muses I suspect you "visit their ladyships more than just 'a vacant hour "now and then.' So great a portion of their favor as

"they have bestowed on you, I should not suppose
"was to be obtained but by a close and constant
"courtship. I thank you for the communication and
"shall always be happy to have my paper improved
"by the production of your fancy. Your address to
"your candle is excellent and shall appear next
"week."

He contributed to the *Port Folio* from 1808 to 1816. The publishers, writing to him in 1809, say: "We have to acknowledge many interesting and valuable communications from you. We rank you among our most valuable correspondents and will hope for a continuance of your favors."

His communications to this magazine were many and varied; at one time it was poetry, at another the description of some new machine, sometimes over the letters "J. C." and others over the letter "C." Many of the old settlers will still remember his sketches with pen and pencil of "Solomon's Falls" and "Buttermilk Falls."

In the May number, 1809, is a drawing and description by him of Mr. Birde's "Columbian Spinster;" in the March number, 1811, a drawing and description of "Eve's Cotton Gin," and in the October number, 1812, an "Ode on Hope."

Jacob Cist was married on the 25th of August, 1807, by the Rev. Ard Hoyt to Sarah Hollenback,

daughter of Judge Matthias Hollenback, of Wilkes-Barré, Pa., whom Charles Miner at that time described as "a charming little girl, apparently about 16 years old, the natural rose on her cheek heightened by exercise, and a sweet smile playing about her lips." On her mother's side she was descended from old New England stock,* and her father's grandfather was a landholder in Pennsylvania as early as 1729. †

After his marriage he returned to Washington and remained there until the spring of 1808, when he removed to Wilkes-Barré and entered into partnership with his father-in-law, under the firm name of Hollenback & Cist, which existed a number of years. For three years Mr. and Mrs. Cist lived at Mill Creek, but in the fall of 1811 they moved into their new house on Bank street, now River street, in the borough, which is still standing. At an early day Jacob Cist's attention was attracted towards the uses of anthracite coal. He was a boy of ten years when his father experimented on the Lehigh coal and might

*Mrs. Hollenback's father, Peleg Burritt, Jr., was a grandson of Ensign Stephen Burritt, who, according to Hinman, was "a famous Indian fighter," and Commissary General to the army in King Philip's war, and his father, William Burritt, the first of the name in this country, was an original settler in Stratford, Conn., prior to 1650. Her mother, whose maiden name was Deborah Beardslee, was the granddaughter of Ebenezer Booth, the son of Richard Booth by his wife Elizabeth (Hawley,) who was living in Stratford in the year 1640.

†See Rupp's "Thirty Thousand Emigrants."

possibly have seen him at work. He must often have heard his father conversing with Col. Weiss, both in Philadelphia and Bethlehem, on the feasibility of opening their mines and making a market for the Lehigh coal long before he was old enough to appreciate the importance of the undertaking or the disadvantages under which these pioneers in the coal trade labored in persuading people of the practicability of using stone-coal as a fuel, though in after years, by observation and study, he saw its importance and he learned by a practical experience the labor and disappointments attendant on its introduction to use. As early as the year 1805 he conceived the idea of manufacturing a mineral black for printers' ink, leather lacquer, blacking, etc., from the Lehigh coal, and the results of his experiments were secured to him by patent in the year 1808. In regard to his discovery Chief Justice Gibson wrote the following letter to Thomas Cooper, who published it in the *Emporium of Arts and Sciences*, Vol. II, new series, page 477.

“WILKES-BARRÉ, Feb. 23d, 1814.

“DEAR SIR—I send you a likeness of one of your “friends. There is nothing remarkable in it, except “that it is done with the stone-coal of this place in- “stead of India ink. It is prepared for use by rubbing “a bit of it on a fine hard stone in gum water, just

"thick enough to hold the particles in suspension. It
"is then laid on in the usual way with a camel hair
"pencil. By a comparison with a drawing in India
"ink you will, I doubt not, give the preference to the
"coal, as it will be found free from a brownish cast,
"always perceptible in the former. The harshness
"observable in the enclosed drawing arises from the
"extreme badness of the pencil I was obliged to use
"and not from the quality of the ink, (which is sus-
"ceptible of the greatest softness). The coal is found
"to be superior to lamp or ivory black for paint,
"printers' ink and blacking leather. It also makes
"the best writing ink for records that has yet been
"discovered. The color is deeper and is not in the
"least effected by the oxy-muriatic acid or any other
"chemical agent and must remain unaltered by time.
"The application of coal to these purposes was dis-
"covered by Jacob Cist, of this place. He has ob-
"tained a patent. Very sincerely, your friend,

"JOHN B. GIBSON.

"Thomas Cooper, Esq."

To this letter Judge Cooper added the following note:

"The only objection to the preceding account of
"the uses to which stone-coal may be put, is, whatever
"mucilaginous substance be used to fix it on the paper
"water can wash it away.

" But that it will afford a coloring matter, unattackable by any acid and unalterable by any time, cannot be doubted.

"The discovery is of importance.

T. C."

This patent was considered to be worth upwards of \$5,000, but a number of law-suits, arising from a constant infringement of it by manufacturers, so annoyed Mr. Cist that he was glad to dispose of it for a less sum. It is said that after the destruction of the Patent Office records by fire, some one else took out a patent for the same idea and is now working under it. After Mr. Cist had removed to Wilkes-Barré he made a study of the adjacent coal-fields, especially at the mines of the Smith Brothers, at Plymouth, and the old Lord Butler opening. He determined upon entering into the mining of coal as a business as soon as he should feel satisfied that the right time had come to introduce it in the cities in large enough quantities to make the adventure a profitable one. That time came with the year 1813, when the British squadron held both the Delaware and Chesapeake bays in a state of blockade. In the spring of that year he undertook to introduce it in Baltimore and Philadelphia. The former project proved a failure, but in the summer and fall he sent several wagon-loads to Binney & Ronaldson in Philadelphia, and their success ap-

peared to encourage the mining of anthracite upon a larger basis, so that in December of that year Jacob Cist, Charles Miner and John Robinson secured a lease from the old Lehigh Coal Mine Company of their property on the Lehigh river, near Mauch Chunk. Mr. Miner, in writing in the year 1833 to Samuel I. Packer on the formation of this co-partnership, says: "Jacob Cist, of Wilkes-Barré, my intimate and much lamented friend, had derived from "his father a few shares of the Lehigh Coal Company's "stock. Sitting by a glowing anthracite fire one "evening in his parlor, conversation turned to the "Lehigh coal, and we resolved to make an examination of the mines at Mauch Chunk and the Lehigh "river to satisfy ourselves whether it would be practicable to convey coal from thence by the stream to "Philadelphia. Mr. Robinson, a mutual friend, active "as a man of business, united with us in the enterprise. Towards the close of 1813 we visited Mauch "Chunk, examined the mines, made all the enquiries "suggested by prudence respecting the navigation of "the Lehigh, and made up our minds to hazard the "experiment, if a sufficiently liberal arrangement "could be made with the company." The following extract from the same letter is sufficient to give the reader an idea of what was accomplished: "On Tuesday, the 9th of August, (1814), I being

"absent and there being a freshet in the river, Mr. Cist
"started off my first ark, 65 feet long, 14 feet wide,
"with 24 tons of coal. Sunday, 14th, arrived at the
"city, at 8 A. M. The coal cost us about \$14 a ton in
"the city. But while we pushed forward our labors
"at the mine (hauling coal, building arks, etc.,) we had
"the greater difficulty to overcome of inducing the
"public to use our coal when brought to their doors,
"much as it was needed. We published handbills in
"English and German, stating the mode of burning
"the coal, either in grates, smiths' fires, or in stoves.
"Numerous certificates were obtained and printed from
"blacksmiths and others, who had successfully used
"the anthracite. Mr. Cist formed a model of a coal
"stove and got a number of them cast. Together we
"went to several houses in the city and prevailed upon
"the masters to allow us to kindle fires of anthracite
"in their grates, erected to burn Liverpool coal. We
"attended at blacksmiths' shops, and persuaded some
"to alter the *tue-iron*, so that they might burn the
"Lehigh coal; and we were sometimes obliged to
"bribe the journeymen to try the experiment fairly,
"so averse were they to learning the use of a new
"sort of fuel, so different from what they had been
"accustomed to. Great as were our united exertions,
"(and Mr. Cist, if they were meritorious, deserves the
"chief commendation,) necessity accomplished more

"for us than our labors. Charcoal advanced in price
"and was difficult to be got. Manufacturers were
"forced to try the experiment of using the anthracite,
"and every day's experience convinced them, and
"those who witnessed the fires, of the great value of
"this coal. We sent down a considerable number of
"arks, three out of four of which stove and sunk by
"the way. Heavy, however, as was the loss, it was
"lessened by the sale, at moderate prices, of the car-
"goes as they lay along the shores or in the bed of the
"Lehigh, to the smiths of Allentown, Bethlehem and
"the country around, who drew them away when the
"water became low. We were just learning that our
"arks were far too large and the loads too heavy for
"the stream, and were making preparations to build
"coal boats to carry eight or ten tons each, that would
"be connected together when they arrived at Easton.
"Much had been taught us by experience, but at a
"heavy cost, by the operations of 1814-15. Peace
"came and found us in the midst of our enterprise.
"Philadelphia was now opened to foreign commerce,
"and the coasting trade resumed. Liverpool and
"Richmond coal came in abundantly, and the hard-
"kindling anthracite fell to a price far below the cost
"of shipment. I need hardly add, the business was
"abandoned, leaving several hundred tons of coal at
"the pit's mouth, and the most costly part of the

"work done to take out some thousands of tons more.
"Our disappointment and losses were met with the
"spirit of youth and enterprise. We turned our at-
"tention to other branches of industry, but on looking
"back on the ruins of our (not unworthy) exertions,
"I have not ceased to hope and believe that the Le-
"high Navigation and Coal Company, when prosperity
"begins to reward them for their most valuable labors,
"would tender to us a fair compensation at least for
"the work done and expenditures made, which con-
"tributed directly to their advantage."

This adventure was so disastrous to the finances of Mr. Cist that he did not engage again in the practical mining of coal, though his mind was never idle in devising plans for the opening of our coal-fields, and for a cheap and rapid mode of getting the coal to market, and his pen was ever busy advocating both to the general public. Although much had been said and written on anthracite coal prior to 1821, Mr. Cist himself having published a pamphlet on the subject in 1815, yet in that year the first exhaustive and scientific article on the subject was prepared by Mr. Cist, being two letters, one to Prof. Silliman and the other to M. A. Brongniart, these with extracts from Mr. Cist's pamphlet of 1815, were published in the *American Journal of Science*, Vol. IV., and created no little excitement and discussion at the time. In this article

he gives the mode and cost of mining the coal and the getting it to market. He gives three carefully taken sections of the strata at "Smith's bed," "Bowman's mine" and at "Blackman's bed." He attached a map showing that the coal formation "extends in a "S. S. Westerly direction, from its commencement at "the upper part of Lackawanna river, near the Wayne "county line, down the course of that river to its junc-
"tion with the Susquehanna, thence along the Susque-
"hanna, keeping chiefly the east side, leaving this last
"river about eighteen miles below this place (Wilkes-
"Barré) it passes in a southward course to the head-
"waters of the Schuylkill river, etc., and from thence,
"after its crossing three main branches, becomes lost,
"a small seam of it only appearing at Peter's moun-
"tain, a few miles above Harrisburg." He then gives
a list of the minerals found in this belt, together with
the dip of the coal and superincumbent strata. He
gives a list of rocks of which the gravel in the river's
bed consists. Then follows a long description of the
vegetable impressions. He gives the specific gravity
of the coal exactly as it is accepted to-day, and
is the first to call attention to the fact that the
true fracture of the pure coal is conchoidal, and
when appearing angular, lamellar and cubical it is due
to impurities. Altogether the article is an exceedingly
interesting one.

James Pierce, in an article in *Hazard's Register* in 1828, Vol. I., p. 314, says: "The valley of Wyoming and its valuable beds and veins of coal have been correctly described in No. I., Vol. IV., of the *Journal of Science* by Mr. Z. Cist,* an able naturalist, whose recent death is lamented by all acquainted with his merit."

The correspondence here begun with Monsieur Brongniart continued until Mr. Cist's death. He sent a number of new species of fossil plants to Paris to M. Brongniart, who did him the courtesy to name them after him.† In sending some specimens of the coal flora to Prof. Silliman in 1825, Mr. Cist makes a strong point of urging the vegetable origin to the notice of the professor. See *Journal*, Vol. —. His pen was at an early date busy in suggesting plans to get the coal to market. He was one of the first to lend his hearty coöperation to the internal improvement of the State. He took a lively interest in all the meetings held in the eastern part of the State, and was one of the committee of correspondence and afterwards a delegate from Luzerne, together with Nathan Beach, to the State Convention, held at Harrisburg, in August, 1825. At first he was a strong advocate of the canal

*From the peculiar signature of Mr. Cist the "Jac." was frequently taken for "Zac."

†*Calamites Cistii*, Bgt. *Pecopteris Cistii*, Bgt. *Sigillaria Cistii*, Bgt. *Neuropteris Cistii*, Bgt.

system or a slack water navigation of the river. In writing to the *Baltimore American*, under date of December 5, 1822, he says: "From partial geological survey, the county of Luzerne possesses coal, level free, which estimated at the low rate of 25 cents per ton in the mine would amount to above one hundred millions of dollars, the value of which would be enhanced from twenty-five to thirty fold on its arrival at Baltimore or Philadelphia. In addition to the coal, "level free, there is from ten to fifteen times that quantity accessible by the aid of steam engine, thus presenting an object alone sufficient to warrant the expense of rendering the river completely navigable, "were the lumber, the wheat, pork, whiskey, iron and "the long list of other articles thrown totally out of view."

As early as 1814 he corresponded with Oliver Evans as to the practicability of using a steam engine and railroad* at the mines on the Lehigh. He ran the levels from here to Mauch Chunk for one, and at

*In a letter to Evans, written December, 1814, he says: "I would thank you also for an estimate of the expense of your *steam wagon* for drawing out a number of low carts, say twenty to twenty-five, each containing $1\frac{1}{2}$ or 2 tons of coal, on a wooden railroad, with a descent of about $\frac{1}{3}$ of an inch in a yard," (or 46 feet to mile). To which Mr. Evans answers from Washington, Jan. 3, 1815: "I would suppose that a descent of $\frac{1}{3}$ inch to a yard could do without cogging the ways, which would save much expense. I had devised a cheap way of rising an ascent by means of a rope, as I apprehended no company could yet

the time of his death he was planning with a Mr. McCullough, of New Jersey, to organize a company to lay a railroad up the Lehigh to Wyoming valley. One of his daughters, when a little girl, at play in his study, remembers asking him "what he was so busy at," his answer was: "My child, I am building a railroad to pull things on over the mountain." Mr. McCullough, in writing to Mr. Hollenback shortly after Mr. Cist's death, intimates that in the death of Mr. Cist the railroad had met with its death, which was a fact.

In the year 1810 Jacob Cist, together with Jesse Fell, Matthias Hollenback, Thomas Dyer, Peleg Tracy and others, founded the Luzerne County Agricultural Society, and he, with Dr. Robert H. Rose, was one of the first corresponding secretaries of the society. He did much towards the introduction of finer grades of fruit trees in our valley, joining with Washington Lee, Charles Streater, E. Covell, Geo. Cahoon and many others of the old citizens of Wilkes-Barré and vicinity, who took pride and pleasure in their fruit gardens. He was accustomed every

be formed in this country to lay iron and cogged railways for any distance. I therefore fixed on wooden ways, one for going, the other for coming back, as close to each other as will admit, and to cover the whole with a shed, this would, in the first making, cost little more than a Pennsylvania turnpike, and much less in 10 years. I cannot state to you the expense of a carriage."

year to get for himself and friends quantities of the choicest fruit trees. He knew the value of the New York gypsum as a fertilizer and advocated its superiority in a paper read before the State Agricultural Society, January 12, 1813. This article was republished in the *Record of the Times*, at Wilkes-Barré, January 8, 1868.

He was treasurer of the county of Luzerne for 1816, and treasurer of the Wilkes-Barré Bridge Company, 1816, 1817, 1818, of which he was one of the original stockholders and founders. He was one of the charter members of the old Susquehanna bank and its first cashier, appointed, 1817, at a salary of \$600. He drew the designs for the notes of the Bridge Company and of the bank.

He geologized this whole section of country for miles up and down the river, finding besides manganese and clays a number of iron beds, in many instances purchasing the land outright, in others only leasing, and at the time of his death he owned large bodies of iron lands. As early as 1815 he entered into an arrangement with Samuel Messemer, of Northampton county, Pa., and John Vernet, of New London, Conn., to establish iron works on the site of the present town of Shickshinny. In the year 1822 he entered into a similar arrangement with D. C. Woodin, but I cannot learn that anything ever came of either.

He early conceived the idea of preparing a work on American Entomology, and labored assiduously at this task until the year preceding his death, when it was so far completed, that he contemplated publishing it, and sent his manuscript with several thousand drawings to a well-known English scientist for inspection, the letter acknowledging its receipt, arrived in Wilkes-Barré after Mr. Cist's decease, but the manuscript and drawings have never been returned; they are now supposed to be in the collection of the East India Company, to whom the scientist left his collection at his death, some twenty years ago. He corresponded for a number of years with Prof. Say and Mr. Melsheimer, the latter writing on Entomology, under date October 6, 1818, speaking of the beauty and correctness of the drawing of insects by Mr. Cist, says: "Good and correct figures are "undoubtedly well calculated to advance the know-
ledge of Entomology. I am therefore the more
"solicitous, that *you* would give to the world your
"promising labor on, and accompanied with descrip-
"tions, etc., of, the North American insects. Such a
"work would be very serviceable to the student of
"American insects."

On the 15th of April, 1807, with Andrew and George Way, and others, he founded the Washington city glass-works, drawing all the plans himself. On

his settlement at Wilkes-Barré, he tried for several years to found glass-works and a pottery at that point, but failed, though he found within easy distance the clays, sand, manganese, etc., requisite to the successful carrying on of these enterprises.

Jacob Cist did not know what it was to be idle, he was busy from sunrise until late in the night, either at science, music, poetry or painting, and during business hours at his business; he was a man ahead of his times, and an enigma to the good people of Wilkes-Barré, who pretty generally thought him an enthusiast, who was wasting his time on bugs and stones. Many people have lived to judge differently of him, and to appreciate his worth.

He died on Friday, the 30th day of December, 1825, aged 43 years. An obituary notice published at the time, says: "In the death of Mr. Cist, "society has lost one of its most valuable members, "science one of its most ornamental and industrious "cultivators—and the cause of public and internal "improvements, one of its most able and zealous "supporters. Modest and unassuming in his manners, "he sought no political preferment—was ambitious "of no public distinction. But like a true lover of "science, sought her in her quiet paths of peace. His "researches into the geological structure and forma- "tion of our portion of the country, and particularly

"into the anthracite coal regions of Pennsylvania,
"have been extensive and indefatigable; and while
"they have contributed to enrich the cabinets of
"many scientific men, both in this country and in
"Europe, with mineralogical specimens, they have
"also been a means of calling the attention of our
"citizens to those vast mines of combustible treas-
"ures with which our mountains abound, and which
"we trust under Providence of giving employment
"to thousands of industrious men and prosperity and
"wealth to our county."

The other local paper says: "In the death of Mr.
"Cist the community has sustained the loss of an
"able and industrious supporter of the cause of
"internal improvements. His indefatigable zeal in
"devising and perfecting plans for the improvement
"of our country by-roads and inland navigation, and
"by disseminating a knowledge of the extent, situa-
"tion and value of our extensive regions of coal, have
"rendered him a public benefactor to our country.
"As a lover of the arts and sciences, his loss will be
"no less felt by those persons at home and abroad
"with whom he has been so extensively connected
"in their cultivation and support. Unambitious of
"public distinction, he has sought to render himself
"useful by devoting a considerable portion of his
"time and services for the common benefit of his

"fellow citizens, and by them will his loss long be regretted and his memory affectionately cherished."

Matthias Hollenback, the father of Mrs. Jacob Cist, was the grandson of George Hollenback, a German settler, "who owned lands and paid quit-rents prior to 1734," in the township of Hanover, Philadelphia (now Montgomery) county, Pa. John Hollenback, a son of George Hollenback, was born about 1720, and probably emigrated with his father to this country when but a lad. The date of his arrival in this country is not known, but it was before the year 1729. In 1750 John Hollenback took up land in Lebanon township, Lancaster (now Lebanon) county, Pa., and in 1772 removed from that section of country to Martinsburg, Berkeley county, Va., where he died. The wife of John Hollenback was Eleanor Jones, of Welsh descent. Matthias Hollenback, the second son of John Hollenback, was born at Jonestown, Lancaster (now Lebanon) county, February 17, 1752. He came to Wyoming in 1769, in a company of forty young men from that part of the country. They were Stewarts, Espys and others, and they came with the intention of settling and becoming citizens under Connecticut laws, and aiding the Yankees in keeping possession of this section of our State. They became entitled to lands under a grant from the Susquehanna Land Company, which they acquired after they had

been a short time in the valley. On their way to Wyoming the company encamped where Mauch Chunk is now situated, and after the coal interest had called into existence a thriving town there, Mr. Hollenback often humorously remarked that he ought to put in a claim to that place, for he was first in possession. The forty adventurers came into Wyoming through a notch of the mountains in what is now Hanover; and when the beautiful valley first broke upon their sight, young Hollenback, the youngest of the company, threw up his hat and exclaimed: "Hurrah, that's the place for me." He began business at Mill Creek, but soon removed to Wilkes-Barré; and having purchased a lot on what is now the west side of the Public square, built a large frame house for a store and dwelling. He purchased his goods in Philadelphia, which were taken to Middleton in wagons and then transported by water to this and other places, where he had established stores. The first method of transportation, was by Indian canoes; and he literally "paddled his own canoe" up the winding, rapid Susquehanna the whole distance, 150 miles, many times, before he was able to procure a more capacious vessel and to employ men to manage it. Then he purchased a Durham boat, which he kept steadily employed. The present road leading through the swamp, was but a little path. Mr. Hollenback in his business

enterprises was prospered in a remarkable manner, and soon acquired distinction and was promoted to positions of public trust and responsibility. On October 17, 1775, he was commissioned as ensign in the "train-band in the 24th regiment in His Majesty's colony of Connecticut." On August 26, 1776, he was appointed by Congress to serve as ensign in Captain Durkee's company of "minute-men," a band raised for the protection of the people in the valley; these Wyoming companies were subsequently ordered to join General Washington's army. Mr. Hollenback was with the army in New Jersey in 1776 and 1777, and took part in several battles. He was in the battles of Millstone, Trenton, Princeton and Brandywine. That he was a man of more than ordinary courage and tact, is evident from the fact that he was several times employed by Washington to visit the frontier settlements and outposts and report upon their condition. About the close of 1777, the settlement of Wyoming being menaced by the enemy, many of the men who were with the army came home, and among them was Mr. Hollenback.

During the spring of 1778 fears were entertained for the safety of the frontier settlement of Wyoming, and as summer approached a sense of insecurity and alarm pervaded the community. Frequent scouting-parties were sent out to ascertain the position of the

enemy. On the 1st of July, Mr. Hollenback, with a companion, was selected for the perilous duty. He proceeded sixteen miles up the river, where he came upon the fresh trail of the Indians and Tories on their march to attack the settlement; and discovered also the bodies of several settlers who had been killed and scalped; taking these bodies into his canoe, he immediatley returned home and reported the presence of the enemy in great force. The inhabitants had already begun to assemble at Forty-Fort, and were actively preparing for the defense of the valley. On the 3d of July, under the command of Colonels Butler and Denison, the little band marched forth to the memorable battle of Wyoming. Mr. Hollenback took a prominent part in this tragic action, acquittedting himself with great gallantry and honor. He escaped the terrible slaughter which followed the defeat of the settlers, and after many thrilling adventures and hardships reached his home late in the night.

From there he went directly to the fort situated on what is now the Public square of this city. He announced his name at the gate, heard it repeated within; "Hollenback has come," was the joyful exclamation. "No, no," responded the familiar voice of Nathan Carey, "you'll never see Hollenback again, he was on the right wing, I am sure he is killed." The gate was opened, however, and Mr. Hollenback

stepped in. It being dark, and there being no candles, Mr. Carey lit a pine knot to see if it was really Mr. Hollenback, and then, overwhelmed with joy, embraced him with a brother's affection. At four o'clock he set out on an Indian path to meet Spaulding with his seventy men, for the purpose of getting them into the fort at Wilkes-Barré. He met them at Bear creek, but Captain Spaulding declined the hazard. Mr. Hollenback, however, so far prevailed as to induce fifteen or twenty of the men to accompany him; on reaching the slope of the mountain near Prospect Rock, he discovered his own house on fire and savages in possession of the fort. Seeing all lost he promptly directed his energies to the relief of the sufferers. He had procured from Spaulding's commissary all the provisions he could pack on his horse, and following the fugitives, mostly women and children, he overtook them and led them through the wilderness. After a few weeks he returned to the valley and set about repairing his loss. His credit at Philadelphia being good, he obtained a few goods and began the world anew. He established his principal store at Wilkes-Barré, and branch stores at Tioga Point (now Athens), at Newtown (now Elmira) and at other places. He had partners in his various enterprises, several of whom in after years became prominent in the business world.

In 1791 he was the business-manager and purveyor for Pickering, while he was holding a treaty with the Indians at Newtown creek.

He was made a justice of the peace after the establishment of the jurisdiction of Pennsylvania in Wyoming, and when the new constitution was formed, was appointed an associate judge of Luzerne county, in which capacity he served until the time of his death, February 18, 1829, the day after he was 77 years of age. His first commission as lieutenant-colonel is dated in 1787, another is dated in 1792, and still another is dated in 1793. The first of them was given by the Executive Council of Pennsylvania, and bears the autograph of Benjamin Franklin. He was a member of the board of trustees of the old Wilkes-Barré academy from 1807 to 1829, and was the first treasurer of Luzerne county. Colonel Hollenback always took great interest in religious affairs and the welfare of the church. He gave largely towards building the first church built in Wilkes-Barré, and was generally punctual in his attendance upon the services. His home was the home of ministers, and his hand always open to them. He was in many respects an extraordinary man, endowed with great capacity and courage, and with an indomitable will which overcame all obstacles. In all his business relations he was a pattern of punctuality,

scrupulously faithful to public trusts and private confidence. His powers of endurance were very remarkable, he took all his journeys on horseback, and his business interest called him from Niagara to Philadelphia. Between Wyoming and the New York state line he owned immense tracts of wild land which he often visited unattended, traveling for days and even weeks through the wilds of Northern Pennsylvania, and being as much at home in the wilderness as in his counting-room.

Judge Hollenback exerted much influence upon the progress and elevation of the country. He provided employment for many poor laborers, he furnished supplies to multitudes of new settlers, he took an active part in the early public improvements, he kept in circulation a large capital; and he was a living, almost ever-present example of industry and economy. Not Wyoming alone, but the whole country between Wilkes-Barré and Elmira, owes much of its early development and present prosperity to the business arrangements and the indomitable perseverance of Matthias Hollenback. Judge Hollenback was employed by Robert Morris, the agent of Louis the sixteenth, to provide a place of retreat for the royal household at some secluded spot on the Susquehanna. This was in 1793. He accordingly purchased 1200 acres of land lying in the present

county of Bradford (then Luzerne), and embracing the locality where Frenchtown, in the township of Asylum, was subsequently built. The unfortunate monarch, however, never occupied this asylum in the wilds of Pennsylvania, albeit many of his subjects did. Louis Philippe, the late "King of the French," in 1795, came through "the Wind Gap" on horseback to Wilkes-Barré, and then made his way up to Frenchtown.

The only son of Judge Hollenback, and the brother of Mrs. Jacob Cist, was George Matson Hollenback, who, inheriting a large fortune from his father, succeeded him in many of his business pursuits. In 1820 and 1821 he was treasurer of the county of Luzerne. In 1824 and 1825 he represented the same county in the Legislature of the State. In 1842 he was appointed by Gov. Porter one of the canal commissioners of the State, but his other business affairs allowed him to hold the commission but a short time. He was president of the Wyoming bank at the time of his decease, Nov. 7, 1866, and had occupied that responsible position for more than thirty years, and for nearly a half century was connected with all the public affairs of the Wyoming valley.

Harrison Wright, the subject of our sketch, was the eldest son of Harrison Wright and Emily Cist. He early developed those mental traits which charac-

terized his maturer manhood. Before he was fifteen years of age he had acquired a marked taste for history and the natural sciences, and he formed at that time an interesting cabinet of specimens and objects illustrative of his several pursuits.

After a preparatory course of study at his home, he was, in 1867, matriculated as a student of Philosophy at the university of Heidelberg, Germany. Upon the completion of four years of studious application in his chosen branches of learning, he was graduated in the spring of 1871, with the degrees of Master of Arts, and Doctor of Philosophy. During his course at the university he became remarkably proficient in the German language and literature, and his natural aptitude for languages led him to the study of the French and Italian tongues, with both of which he became familiar.

His especial study at Heidelberg was mineralogy; his excellence in his pursuit of this science induced his preceptor, the late Professor Blum—the leading mineralogist of his time—to select Mr. Wright as assistant professor of mineralogy; but a prolonged summer's absence from the university led to the appointment of another.

Much of his time during vacation was spent in travel; he visited many of the capitals of Europe, and in seeking needed relaxation from the duties of the

university, he acquired much practical knowledge of the customs and manners of the several countries. During the time he spent in Rome, he studied the archæology and explored many of the remains of the Ancient City. In this research he became associated with the members of the Archaeological Society of Rome, who, in appreciation of his tastes and scholarly attainments, elected him a member of their society. He became also an honorary member of the Papal Club, a social organization of the officers of the Papal Guard.

He returned to America in the summer of 1871, and in the following autumn he entered as a student of law the office of his uncle, Andrew T. McClintock, LL. D., of this city. After the prescribed course of study, during which he exhibited as marked aptitude for the dry precepts of the law, as for the more congenial researches in literature and science, he was admitted to the bar of Luzerne county, September 14, 1874, under circumstances, which afforded ample assurance of his distinguished success in a profession to which his family had contributed several able members. But he, however, was attached to a vocation which offered distinction of a different kind, and soon abandoned the active practice of the law; but not until he had gained great credit and commendation for his able services as one of three auditors appointed

by the court to make a special examination of the accounts of the county; a work which involved the minutest inquiry into its financial affairs for the preceding seven years, and the auditing of all the accounts in their multitudinous details; the practical results of which were the recovery of a large sum of money, and the exposure and punishment of the parties guilty of the embezzlement.

Mr. Wright was a democrat in politics, and like all his father's family, positive in his convictions. In a number of campaigns he accepted and intelligently and satisfactorily acquitted himself of the city contingent of the party. In this way he won the confidence and esteem of the members of his party, who repeatedly solicited him to accept political honors, but these offers, like the law, failed to lure him from the pursuits upon which his heart and ambition had long been set. He was once regularly nominated for a seat in the Legislature, with such unanimity and cordiality as would almost certainly have insured his election, but, though willing to do service in the ranks whenever called upon, he peremptorily declined this proffered and well deserved reward. His leaning, in part inherited as I have already said, manifested in early youth and encouraged and intensified by his education, was towards literary and scientific pursuits. To these he gave much attention,

even when studying and practicing law. He became a member of this society, was immediately assigned a leading position in it, and found here a fruitful field for the employment of his varied talents. He took charge of and arranged its extensive mineralogical and other collections, adding to them from his own rich private stores and assiduously gathering valuable contributions from other sources. He prepared numerous papers of much value and interest on a diversity of subjects, he accumulated by persistent research many previously undiscovered facts in the history of the valley and of the coal-trade, until every material incident of each—so thorough was his study and so retentive his memory—was before him like the words upon a printed page, which enabled him at all time to answer with great clearness and accuracy all inquiries, concerning either of these subjects. When the late Isaac S. Osterhout decided upon his munificent bequest for the founding of a public library in Wilkes-Barré, Harrison Wright was in the midst of these labors and had achieved the reputation of being perhaps the best historical and scientific authority in the community, and the testator's thoughts naturally turned to him as one fitted in all respects to take a leading part in executing the trust, and he appointed him one of the trustees. Had he lived, he would have been of inestimable service in

the preliminary arrangements for and securing the practical operation of the library in accordance with the generous designs of its founder.

All who knew Harrison Wright must have been impressed with his unselfish and generous disposition, his genial companionship, his thoughtful and kindly consideration in all his relationships, and his warm and true friendship, as well as by his scholarly attainments, the wide scope of his mental powers and his extended and accurate learning in many and diverse branches of human knowledge. His time, his talents and his means were but instruments toward the attainment of his honorable ambition, the endeavor to let light in where darkness had previously prevailed and open thoroughfares in the hitherto trackless places in history and science. And in the every-day relations of life, there are many who could attest that his generosity was only bounded by his ability to give. His capacity for labor—the exacting labor of the fields to which his inclinations led him—was exceptionable. He did not deny himself reasonable recreation, but what he esteemed to be his duty was never permitted to wait upon pleasures to which he was invited, and the secrets of his success and of the results achieved in so short a lifetime were his steadfastness of purpose and his continuity of application. Where his strong sympathies led, his energies followed.

When there was a new duty to be performed, he was never too overburdened to undertake it, though other tasks in various stages of progress were piled high before him.

It is not often that we can speak thus in praise of the achievements of one so young as Harrison Wright was when he died, and yet abide within the strict limits of the truth, but our friend was one among a thousand. His sudden and generally unexpected departure from among us has left a void in our ranks it will be difficult, if not impossible, to fill. It is inexcusably ungrateful in the midst of the Maker's many and munificent providences, to speak of any earthly loss as irreparable, but the loss of Harrison Wright to this society is as nearly irreparable as any loss could be.

BRIEF REVIEW OF THE LITERARY WORK OF HARRISON WRIGHT, PH. D.

[By SHELDON REYNOLDS, M. A.]

It has been well said that the worth of an individual, the value to be placed on his life-work, cannot be determined until the work is finished—finished in the sense of ended. When, however, the work is ended almost at its beginning, after the intellectual faculties have attained a development adequate for the purposes intended, and the mind, expanded and cultivated, garners the results of patient research and observation in careful preparation for future work; when thus equipped and ready to set out, one is at the threshold called away, the promise of such a life becomes a potent element in the appreciation of its true value. That which has been accomplished may be computed more or less correctly by an examination of its merits and defects; but the promise, the possibilities of the future, must be judged not only by the work performed, but also by the efficiency of preparation, the capabilities of the intellectual faculties, and the circumstances having relation to the results. In the present instance are found all the evidences by which

to arrive at an exalted judgment, and the several elements which gave assurance of a useful and brilliant future.

Dr. Wright in his early youth evinced a taste for American history and the kindred subjects of American archæology and genealogy, which subsequently gave a bent to his literary pursuits; though general literature, also, and the natural sciences possessed a charm for his mind and occupied a share of his attention.

It is not the purpose of this note to do more than briefly mention the few essays and papers which have come under my observation.

"Early Shad Fisheries of the North Branch of the Susquehanna River," "A Memorandum Description of the Finer Specimens of Indian Earthenware Pots in the Collections of the Wyoming Historical and Geological Society," "Report of the Special Archæological Committee on the Athens (Pa.) Locality," and "Circular of Inquiry Respecting the Old Wilkes-Barré Academy" have all been published.

The first is a concise narrative of the important facts concerning that traditional industry, shad fishing—still cherished in the memory of many old settlers—which partook partly of the character of business, and somewhat also of the nature of

sport, with a flavor of home-stilled whiskey, if we may ascribe such tastes to a generation of correct habits. It contains much of local interest and many valuable facts drawn from all available sources, particularly useful at the present time in connection with the attempt to restore shad to the waters of the Susquehanna. It has been published in the *Bulletin of the U. S. Fish Commission*.

The second is a description of the Indian pottery in the possession of this society, illustrated with heliotype plates, thus rendering the specimens available for study and comparison to those interested in the subject, by whom it was received with many expressions of favor.

"The Report of the Special Archæological Committee" is an account of the excavations made by the committee at Athens, Pa., and the result of its work; it is published with plates in Part I, of Vol. II, of the Society's Proceedings and Collections. All the details are carefully noted, the relative position of each object and the condition under which found are recorded, together with an accurate description of the several articles of pottery, ornament and utensil which were obtained. The result of the work was the addition of the valuable Tioga pottery to the Society's collection, and the accumulation of many interesting facts concerning the methods of burial among the aborigines.

"The Circular of Inquiry Respecting the Old Wilkes-Barré Academy" was compiled from manuscript documents lately discovered, and published in pamphlet form for the purpose of eliciting information sufficient to warrant the writing of the history of that institution. The school was incorporated in 1807, and for many years was the foremost seat of learning in this section of the State. Many of the men who were connected with the institution in its management or as pupils attained eminence in the law, theology, or literature; others contributed toward the material development of the country, and left as monuments of their indomitable energy and intelligent forecast, the numerous coal-breakers, the railroads, and canals of this region. The circular comprises a sketch of the school and a list of scholars, and is accompanied by a broadside containing brief biographical sketches of the forty-six men who served in the board of trustees from 1807 to 1838. Many additional facts were gathered by this means, and the contemplated work was begun, but the time proved too short for its completion.

Passing to the unpublished and unfinished works, the first in order of importance is "A Genealogical and Biographical Record of the Descendants of John Jacob Weiss, of the Village of Walheim, Kingdom of Würtemberg, who settled in Philadelphia, A. D.

1740." containing also the genealogies of the Cist, Hollenback, Wright, and other related families. The compilation of the facts involved a large correspondence, continuing through several years, and the search of many volumes of records, as well as the examination and arrangement of a mass of evidence. The several biographical sketches of the prominent members of the families which appear in the work, are written with care and discrimination, and incidentally review many subjects of contemporaneous local and general history. The work possesses much merit, and is a witness to the industrious research, application and critical discernment of the author. It was to have been privately printed for distribution among the members of the several families, and its preparation had so far progressed as to be nearly ready for the press.

"Early Printing," a lecture recently delivered before the Young Men's Christian Association of this city, had been re-written and amplified with the view of publication. It begins with an account of the art of the transfer of form by impression, drawn from biblical and other writers, and the discoveries of archæologists. The conditions of libraries at the time of the Christian Era, the number of works issued and manner of publication are reviewed. Continuing, it narrates the decline of letters during the

Dark Ages, with the causes and effects of such decline and the circumstances of their revival with the dawn of the art of printing, together with a view of the causes and conditions which led up to and rendered possible the great discovery. This is followed by an account of the art in its early stages of development. The subject is treated in an original and attractive manner which sustains the interest throughout. It evinces a thorough knowledge of the works of the classical writers and contemporaneous events of history. The lecture was illustrated by means of a large collection of rare specimens of early printing as well as unique and beautiful manuscripts, which he had secured during his residence of several years at Heidelberg and Rome.

"Anthracite Coal and the Beginning of the Coal Trade," in its scientific aspect as well as in relation to its historical circumstances, was an interesting field of study. A great deal has been written on the subject during the preceding quarter of a century, and many errors and misstatements of facts have from time to time appeared in print and subsequently found a place in encyclopædias and other books of reference. It has been said that the coal-trade first began in 1820, in the Lehigh region; there are books and charts which seem to sustain this statement; nevertheless it is an error. The continuing industry

of the mining of anthracite coal had its rise in the Wyoming region in 1807, and had been in operation continuously for several years before its establishment on the Lehigh; mines had been opened, a market for the product established in the towns of the lower Susquehanna and regularly supplied with the fuel, and in 1812 its introduction to the market of New York city was effected. It is true, that the subject has been treated by competent writers, notably by the late Volney L. Maxwell, Esq., in two admirable lectures which were delivered before this society, and issued from the press as "Publication No. 1," of the Society; the historical view of the matter, however, is somewhat meager, owing perhaps to the lack of material at hand, or to the fact that the character of the address did not require its further elucidation. Also by Dr. Charles F. Ingham, and Wm. P. Miner, Esq., in the "History of Luzerne, Lackawanna and Wyoming Counties;" the one ably treats of the geology of the Wyoming coal-field, while the other discusses with his accustomed felicity the inception and development of the coal-trade. None of them, however, was designed to be a history. Previous to the publication of the latter, Dr. Wright had begun the preparation of a work of a scope and compass sufficient for the presentation of the subject in all necessary detail; with this purpose he had

gathered a large amount of data, much of it being the valuable papers of his grandfather, the late Jacob Cist, Esq., a gentleman of acknowledged scientific attainments, whose name is prominently connected with the industry through his arduous efforts in its early development. Dr. Wright had collected a mass of material and elaborated his plans for carrying into execution the undertaking in hand, but the demands upon his time, caused by the attention he necessarily gave to other literary work and his usual affairs of business retarded the completion of this work, which was intended to be exhaustive in its treatment and authoritative in its conclusions.

"The Report to the Minister of Public Instruction and Fine Arts," and the "Observations of the Very Ancient MSS. of the Libri Collection," by M. Delisle, Administrator General of the National Library of France, in which the brilliant essayist demonstrates by an argument singularly satisfactory and convincing that a large number of the manuscripts of the celebrated Ashburnham collection was stolen from the libraries of France, were translated by Dr. Wright and widely circulated in this country to further the purpose of M. Delisle in acquainting all probable purchasers with the stigma attaching to these stolen manuscripts, and to that extent preserving to France the opportunity of recovering them. The translation is in a large

degree literal, while all the clearness of diction and strength of argument are preserved. This work was prompted by his keen appreciation of the enhanced value of these manuscripts when restored to their proper places, and the dishonor which would taint them in the possession of an American purchaser. The brochures were received with many complimentary notices and general commendation by the press of the country, and appreciative acknowledgments by learned societies; and it is believed they accomplished the purpose intended. In acknowledgment of his services, and—to quote the words of M. Delisle—"the zeal with which he defended the cause of the public libraries of France," he received the thanks of the Minister of Public Instruction and Fine Arts, and of the Administrator General of the National Library of France, together with other marks of their distinguished favor.

A third translation on the same subject which he had prepared, entitled "Observations on many MSS. of the Barrois Collection," consisting of ninety-one closely written pages, had not been published, though completed.

Another translation worthy of remark is entitled "Emblemata, or Inscriptions on Certain Noteworthy Gold and Silver Coins of German Potentates and Rulers, with a Short Description of the Same,"

from the German of John Leonhard Weidner. An abstract of this paper was read before the Society; it consists of eighty pages of manuscript. Several years since Dr. Wright presented to the Society a valuable cabinet, containing many of the silver coins of Germany which he had collected with care and discrimination during his residence abroad; for the purpose of illustrating these and to facilitate their classification, he prepared the paper mentioned, which his familiarity with the German tongue and history and his knowledge of the science of numismatics rendered a congenial and easy task.

A mind devoted to the study and contemplation of subjects of scientific and historical interest and occupied in the formulation and expression of the deductions and conclusions therefrom, seldom turns to the composition of lighter literature even for diversion or recreation. A pen which elucidates the structural geology of the coal-measures, or traces the cause and effect of events of history, or states conclusions from crude facts of ethnology and archæology, is liable to fail in the delineation of the plot of a romance, or in portraying the humorous incidents of an adventure; yet such was his versatility that with equal facility he turned from the one to the other. Among the latter productions is "*Walpurga, A Tale of the Crusades;*" it introduces us to the festivities

of the tournaments at Nürnberg in the time of the twelfth century, and affords a brief acquaintance with the heroes of the Crusades, engaging the interest of the reader by descriptions of quaint customs and glimpses of the social condition of the people. Walpurga, the heroine, might indeed, even in the unromantic days of the nineteenth century, find a knight to break a lance in her behalf.

"Bill Simpson" is the title of an adventure among the miners in Colorado. The plot, so far as it is disclosed in the unfinished state of the narrative, presents much ingenuity, and, like its author, has the faculty of evolving many honorable traits in characters which seem unpromising enough at first acquaintance. It was doubtless suggested by his own experiences among the people of the region mentioned.

"The Diamond, A Story of the time of Caliph Al Mamun," is a highly interesting tale of the loss of a rare gem; tracing it to the possession of its many successive claimants, and enlisting in its pursuit the aid and sympathy of a multitude of people, it reaches the climax of the ever-increasing excitement and confusion in the ludicrous discovery, upon the finding of the object of search, that it is but a worthless imitation, the real gem meanwhile being in a secure place. The story abounds in animated description and

dramatic incident, and is told in a quaint manner suited to the time and circumstances of the plot.

A poem of twenty-six stanzas, descriptive of the battle and massacre of Wyoming, and a dozen or more shorter ones treating of the incidents of the battle and the flight, are comprised in the title "Rejected Poems," which were designed originally to have been published in one of the local papers, with the intimation, as suggested in their title, that they had been declined by the publishing committee of the centennial of 1878. The title was an intentional misnomer. One of the concluding stanzas seems to me to summarize with such incisive irony the Tory commander's official report, that I quote:

"John Butler's tale of victory
Is told in briefer words,
'A thousand cattle we have taken,
'Sheep and swine in countless herds;
'The rebel forts are overturned
'And all their mills and houses burned,
'The nest no more shall thrive.
'Eleven score or more, we're told,
'Of scalps our Indian allies hold—
'Ready to change for British gold—
'And prisoners—we have five!'"

In addition to these, thus hastily sketched, there is a number of articles in various stages of preparation: a compilation of local superstitions, and other folk-lore; sketches of the early settlement of the valley, introducing the locally historic characters, and

giving a view of the every-day life of the men and women who endured the privations and hardships of a century ago; and contributions to periodicals and book reviews.

In his lighter composition there is apparent a delicacy of touch, and an unobtrusive element of strength running throughout the whole; while a pervading spirit of benevolence, like the subtile haze on a landscape, softens the outlines and lends a charm to all his conceptions. In reading them, one becomes conscious that they are the productions of a mind of quick sensibilities and of matured faculties.

From this imperfect review we may know that the life of our lamented friend was one of continued mental activity; that during the brief period allotted to his mortal existence he had accomplished much of lasting value and worthy of high commendation; and that his future was full of promise. Had his life been spared, the full realization of his honorable aspirations would have crowned his endeavors. But in the midst of his work he was cut down; in the enjoyment of his ample mental powers, and in the bloom of manhood

“God’s finger touched him, and he slept.”

DR. HARRISON WRIGHT.

The souls that were brave, and whose footsteps were dutiful,
And love was the light they shed,
Whose deeds made their lives, when living, beautiful,
Surely these are the Beautiful Dead.

And lo ! 'mong the noble of memory's numbering,
Some lives, so surpassing fair !
Like the roses that bloom, while the dead are slumbering,
Their beauty forbids despair.

Of such was the friend of the choosing and cherishing,
Alike of the young and the old —
Friendship, sweet in the leaf, as after the perishing,
And at heart, as fragrant to hold !

Oh ! flower of filial love's fondest engendering,
Fearless glance of immortal, kind eyes !
Oh ! smile of the brave, all self-love surrendering !
Kind voice ! the heart's pleasant surprise.

Kind eyes ! and yet keen, that turned so forbearingly
From the bad to the good in a friend !
Rare, gifted intelligence ! smiting not sparingly
The wares the false teacher would vend.

He loitered not where the lotus was flowering,
And fled from the blight of its bloom ;
But he loved the bright dreams of Nature's own dowering,
A stranger to grief and to gloom !

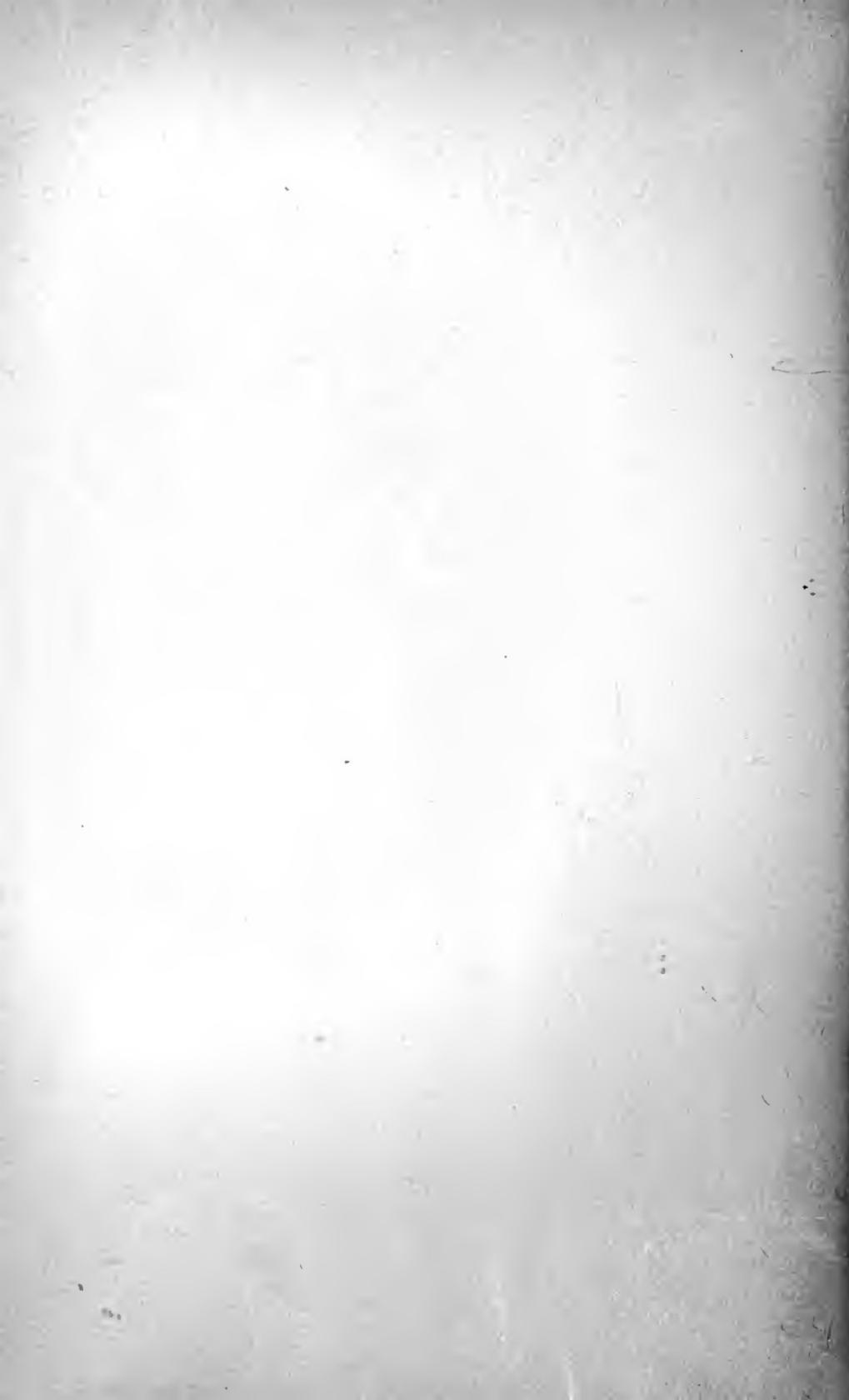
For him all beauty was ever in blossoming —
His mind was a garden in bloom !
And Science, to him her secrets unbosoming,
Were legend most meet for his tomb.

His tireless quest, the honey of history,
For winters ahead, had hived ;
And of fading traditions—despite Death's mystery,
Say not he was short-lived.

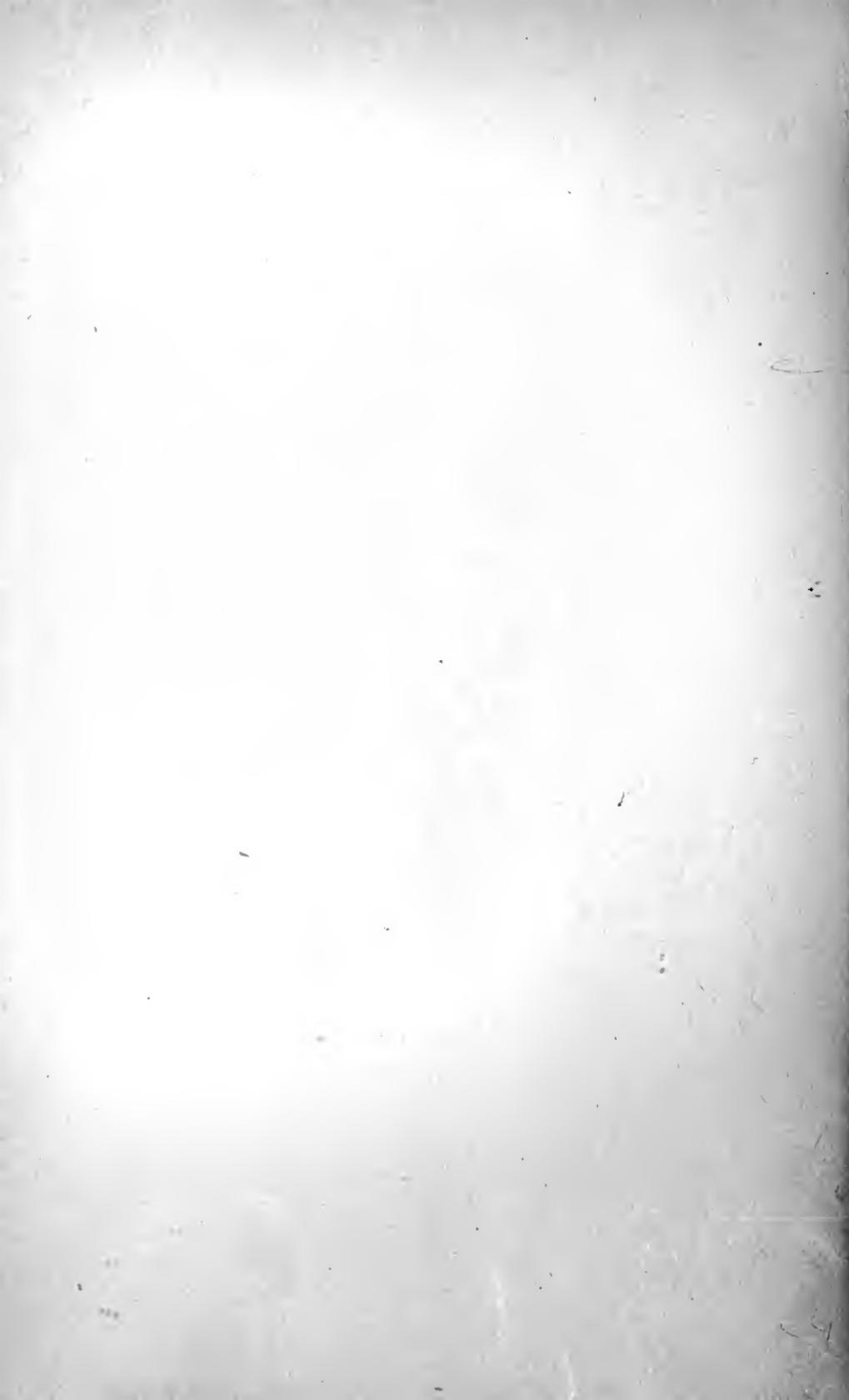
A light indistinct Death's deeps are borrowing —
'Tis the Dawn, with its deathless rays !
Yet we weep, and for soul so lovable sorrowing,
Every tear is a pearl of praise !

The heart that was brave, and whose friendship was beautiful,
The spirit such lustre that shed,
Now reaps the reward of the wise and the dutiful,
In the home of the Beautiful Dead.

D. M. JONES.



PART II.



BAR OF LUZERNE COUNTY.

A meeting of the Luzerne Bar was held February 23, 1885, in the room of the Bar Association, to take action on the death of the late Harrison Wright, Esq.

Judge Stanley Woodward was called to the chair, and H. A. Fuller, Esq., was made secretary. On assuming the chairmanship Judge Woodward said:

Gentlemen of the Bar: In making to this meeting the formal announcement of the death of Mr. Harrison Wright, I perform one of the saddest duties of my life. And I am well aware that my own feeling at this time is not peculiar or personal only, but that a common sentiment and sense of loss fills all hearts. For our deceased friend and brother, although among the youngest members of this bar, was still old enough to have become one of the most familiar, as well as one of the most respected and beloved characters in the community of which we are all members.

And it would seem, too, that the modesty and quiet simplicity which characterized our deceased friend, were the very qualities which brought him into full view. Because he constantly and consistently

sought to avoid public recognition; never obtruded himself or his own opinions; always declined social or political prominence; for these and other reasons such as these, Harrison Wright was an unusual and a marked man.

The announcement of his death, after an illness so brief as to have scarcely caused him to be missed from his accustomed paths, came upon us with stunning force. The sad event recalled to my mind the death of the senior Harrison Wright, the father of the deceased, which occurred nearly thirty years ago. He was a great lawyer, full of vital force, always in the front, and fully identified with the interests and activities of this great county, which he had, for some years, represented in the legislature of the State with signal ability. He was called away in his prime, at the age of forty-one, and his death seemed to create at the bar, and in the community at large, a great void.

Our deceased friend, in whose honor we are now assembled, was but thirty-five years of age, and although bred as a lawyer, and gifted by nature with that solid understanding and that acute appreciation of right and wrong, which, in the long run, brings the highest professional success, had never been an active practitioner at the bar. Somewhat because of delicate health, but more, perhaps, in response to the

dictates of an inborn taste, he was a scientific and literary man, rather than a lawyer. His studies were broad, curious, comprehensive and unselfish. Science in many of its departments, including mineralogy, numismatics, statistics and chronology, was his delight. His knowledge of the languages was great. His fund of information in all matters pertaining to our local history was well nigh inexhaustible.

It is not to be wondered at that such a man should have preferred the quietude of the library, to the hurly-burly of the court-room. Antagonism and conflict grated harshly upon the chords of a soul fitted as was his, for the sweet concords and gentle harmonies of nature and the fireside. His labors for our Historical Society were constant and proverbial, and they were altogether labors of love. His interest and membership in many of the most prominent scientific associations of this country and of other countries, indicate the aspirations and tendencies of his mind.

The necessary limits of such an informal tribute as can be made on an occasion like this, forbid me to go more fully into the history of the life and character of our deceased brother. This will be done elsewhere. But no notice of him, no matter how imperfect it must be, would be worthy even of this occasion, which should fail to recall him as a most

polished, considerate, and attractive gentleman. It is not my wish, even in the exuberance of fresh grief, to say one word of our friend, which the colder judgment of a later day will not approve. But thus restrained, I feel that I speak for all those who knew him well, when I say, that he was a most genial companion and a most generous and agreeable friend. He rejoiced in being able to make others happy. He was incapable of a mean or an unrighteous act. He was too great a man to do a small thing, or to do a great thing in a small way. For all these reasons, and not because he sought for popularity, he was perhaps the most popular citizen in the community. His death will be most deeply felt in the family circle of which he was the center. Within that sacred precinct the sense of bereavement is too great for words. And in that social circle of which he was the most conspicuous figure, his loss will prove an affliction great and irreparable.

“For open converse is there none,
So much the vital spirits sink
To see the vacant chair and think
How good! how kind! and he is gone.”

Judge Dana followed in a heartfelt tribute to the deceased. He felt that he could add but little to the very beautiful synopsis of the character of Mr. Wright, just given by the chairman. He knew him

very long and very favorably. He was a modest man. In fact, modesty was a most distinctly marked feature in him, and it has been truly remarked that "modesty is the candle of merit." He remembered him soon after returning from the war, as a slim, black-eyed youth, who asked for the address of several famous generals. He was then making a collection of autographs, showing at that age a taste for the work to which in after years he devoted so much attention. He had a wonderful power of acquisition of knowledge, especially so in historical and scientific matters. Neither was his knowledge superficial, although embracing such a wide range of subjects. It was precise in everything. As a warm personal friend no one excelled him. He was remarkable for his truth, his purity and all absence of personality. It was a pity that he did not apply himself to the practice of law. His talents, his universal historical knowledge, his fine personal appearance, would have placed him in a front position at the bar. As a member of the Wyoming Historical and Geological Society his loss will be beyond repair. He was relied upon as a part of the institution. The Osterhout library will greatly feel his loss, for to him was generally accorded the superintendency of that work.

Judge Dana then moved the appointment of a committee of three, to draft a suitable preamble and

resolutions. The chair appointed Judges Dana and Rice, and G. R. Bedford, Esq. They reported the following:

The death of Dr. Harrison Wright at his residence in this city, on Friday morning, the 20th inst., has caused a deep and general feeling of regret. Throughout the wide sphere of his business, intellectual and social activities, there is a sense of the loss of one esteemed for his worth and works, and loved for those qualities which endeared him to all as a friend and associate. Although not an active, he was nevertheless a learned and esteemed member of the bar of Luzerne county, and it is therefore meet that public and formal expression be given of its esteem for his worth and of regret over his death.

The full and favorable notices which have appeared in the press of this and other cities, and the memorial volume which will be hereafter issued, make it unnecessary to present on this occasion more than a brief summary of his life and character.

He was born in this city on the 15th day of July, 1850, and had, therefore, not completed his 35th year. His father, Harrison Wright, a brilliant advocate and leading member of the bar, died in 1856, at the early age of forty-one years. He was a nephew of the Hon. Hendrick B. Wright, lately deceased, and of

the Hon. Caleb E. Wright, now of Doylestown, Pennsylvania, both of whom were also active and leading members of the bar.

The Wrights came from England in 1681 with William Penn's colony of Quaker emigrants and settled in New Jersey, whence Joseph Wright, the grandfather of the deceased, removed at an early day to Wyoming valley, and up to the time of his death was a resident and esteemed citizen of the township of Plymouth.

Mrs. Emily L. Wright, the mother of the deceased, was a daughter of Jacob Cist, Esq., a gentleman of much enterprise, of marked intellectual and scientific attainments, and a pioneer in directing attention to and developing the anthracite coal-fields of Pennsylvania. Mrs. Wright's mother was a daughter of Judge Matthias Hollenback, one of the few survivors of the Wyoming massacre of July 3d, 1778, and who after that event continued to reside in Wilkes-Barré, and was known as one of her most prominent citizens and wealthiest merchants.

In Mr. Wright's boyhood pulmonary symptoms appeared, and from impaired health, his early studies in school were frequently interrupted. A residence for a year in Santa Cruz arrested the further progress of disease, and on his return, in 1866, he was sent in the spring of 1867 to the university of Heidelberg,

in Germany, where, after a course of four years of diligent study, he graduated with high honors as Doctor of Philosophy in the spring of 1871. In addition to his classical attainments, and to his thorough knowledge of the German, French and Italian languages, he excelled in chemistry, mineralogy, metallurgy and geology. Parts of his vacations were occupied in extended tours in pursuit of these studies through different districts in Europe. One of these vacations, however, was employed in following, at no small risk, in the wake of the Prussian army, and in visits to many of the battle-fields of the Franco-Prussian war, yet reeking in the blood of the slain, and ere the smoke of the conflict had cleared away.

Returning home, he entered the office of A. T. McClintock, Esq., as a student of law, and was admitted to the bar, September 14th, 1874. He combined in person, voice, manners, intellectual acquirements, and ready command of language, every requisite of the successful advocate; but an aversion to forensic effort, led him to restrict his legal labors to the investigation of land titles, and especially to those involving questions of historical interests. He was thoroughly conversant with the facts and the law connected with the titles derived through the Connecticut claimants in the seventeen townships.

His tastes and previous studies specially qualified him for the work of classifying and arranging the specimens and manuscripts in the cabinets and library of the Wyoming Historical and Geological Society. This he undertook and persistently continued up to the very close of life; and his energy and enthusiasm infused new life into that institution, increased its membership and funds, and contributed largely to assure its permanence and an honorable place among the scientific and learned societies of the land. That his attainments in science and history were widely recognized, his membership in a long list of learned societies in this State and elsewhere attests.

The several merits developed during long years in the ancestral stock whence he sprang, seem to have been combined, transmitted, and to have blossomed into great promise in the character of Dr. Wright. Truth, honesty, purity, a high sense of honor, natural intellectual endowments, increased by broad culture, industry, persistent application, an aptitude to learn united with tenacity of memory to retain, were among his characteristics.

Whilst history and science were his favorite studies, his mental horizon inclosed every subject of large human interests. He exemplified the declaration of Cicero: *Homo sum, humani nihil a me alienum puto.*

He was the center of a large circle of friends, and although positive in his opinions, and frank and fearless in their expression, he made no enemies. His honesty disarmed hostility, his respect for the feelings of others restrained him from personalities, so that he could condemn offense without needlessly wounding an offender.

He was a diligent reader, and a judicious collector of books. They were his loved and cherished companions, and he was wisely selected as one of the trustees of the Osterhout library, and principally relied on to organize and accomplish the work devolved upon them.

Rarely in so short a life has so much been attained. But the resistless hand of death has arrested him in the morning of his usefulness, and a sad, though beautiful memory remains of a life of much performance and of larger promise.

It is thereupon by the bar of Luzerne county
Resolved, That in the death of Dr. Harrison Wright we recognize with sorrow the loss of an esteemed and learned member, associate and friend, and of an upright citizen.

Resolved, That we deeply sympathize with the stricken mother, brother and sisters of the deceased in their bereavement, and that an attested copy of the

foregoing preamble and resolutions be sent to them, and also that a copy be published in the papers of the county.

Resolved, That the members of the bench and bar, wearing the usual badge of mourning, will in a body attend the funeral of our late associate and friend.

On a motion to adopt the report, Judge Rice spoke: He could add nothing to the beautiful tributes which had been paid to the deceased brother, but he desired to give his personal testimony to the truthfulness of what had been said. Together with another gentleman he had been thrown in close contact with Harrison Wright for a period of some two years, in a work the duties of which were neither pleasant nor profitable. They were duties, however, of such a kind as were bound to develop positive traits of character, if a man had them. Dr. Wright had them, as I soon found out. During this work I became impressed with his universal knowledge of literary and scientific matters. There were other traits of character developed while we were thus thrown together, which showed him to be a true man. He was entirely unselfish. He was a pure and honorable man. He was simple in all his ways. Unfortunately for the bar he did not practice the profession of the law, but it was not unfortunate for scientific and

literary societies or for the community that he did not do so. He became highly useful in ways that a man less modest and less unselfish would never have sought. While he became a man of great popularity, it was not by reason of negative qualities. He was a positive man, and he followed his convictions wherever they might lead him, and he was possessed of such convictions as enoble and exalt.

A. R. Brundage spoke of one thing which had recently come to his attention, which he conceived to be the crowning feature of the beauty of his whole life. It was his devotion to his aged mother. To all who knew of it and had witnessed it, whether at home or abroad, it seemed sublime. In the midst of exacting duties he never neglected her. It was a pleasure to him to minister to her wants, and his devotion to her was never once placed in the background by his love of books or research.

George R. Bedford then said:

Mr. Chairman: I cannot hope to add anything to the mournful interest of this occasion, but my acquaintance with our friend was of so long standing, my admiration of his character so great, my estimate of his abilities and his acquirements so high, and my sorrow at his death so sincere, that I feel constrained to offer this humble tribute to his memory. I was a

member of the board which examined him for admission to the bar, and his thorough preparation gave promise of high standing in the profession, but his tastes led him rather in paths of scientific research, and in that line his attainments were prodigious. So anxious was he that his knowledge should benefit others that not only did he take an active and leading part in the organized societies with which he was connected, but in addition he had at different times gathered together the children of his neighbors in an Agassiz class, and thoroughly instructed them in that branch of natural science, wherein the great professor made his fame. His services to the Historical and Geological Society are beyond estimate. Without them that enterprise, we all know, proved a failure, but with them, its lost vitality was restored and its success assured, and it exists to-day a monument to his memory, reflecting credit on this whole city. Though our friend was of pronounced convictions on all subjects and ready to assign reasons for the faith that was in him, yet he was never offensive in expressing his opinions. His simple-heartedness, his warm nature and pure mind made him a very winning character. He has left vacant a place in this community, but more than all else by his mother's side, which can never be filled. He commanded the respect and the love of large numbers of the people

of this city, and they will join in the prayer wafted to heaven this day that his spirit may rest in eternal peace.

The following letter from General McCartney, who was absent, was read:

WILKES-BARRÉ, PA., February 21st, 1885.

MY DEAR SIR:—I very much regret that I shall not be able to attend the bar meeting next Monday, which I hear, will take action on the death of Harrison Wright.

I crave permission to go on the record as one of his late friends and as one of his very numerous and sincere mourners. Had the death angel picked from all the world, outside of my nearest relatives, it could not have struck me a more painful blow.

To me it seems most like a most terrible dream. Only ten days since, I passed an hour with him, and there was the same apparent health of mind and body, the same unselfishness, the same distinguished but unobtrusive acquirements, the same charity and forbearance, and the same old charm of intercourse that so many of us have known and enjoyed for many a day.

And now, he has gone, noble and generous soul!

It is common and easy to extol most dead men, him we could not disparage if we would. I knew

something of his inner life, so fair and manly. Living, he sought not the mere praise of lips, but the right, and the love that right begets. Dead, I shall not attempt his praise, our love shall go with him to the hereafter. He has gone without a parting word, and they tell us all this is right. We shall miss him and mourn for him, even as we stand and wait for the inevitable summons.

There is only this consolation; men are very rare, so strong and gentle, so accomplished and modest, and he was my friend; we shall look beyond the grave border, we shall still live together in comforting recollections, and if from the heavenly heights he now holds us in his immortal vision, he cannot doubt our sorrow, he knows our love.

Poor Hal! How truly it may be said:

“None knew thee, but to love thee,
None named thee, but to praise.”

W. H. McCARTNEY.

Hon. Stanley Woodward.

W. P. Ryman added his testimony to the many good qualities of head and heart of Dr. Wright. He spoke of how readily the deceased brother impressed himself upon people without an effort to do so, and illustrated by the knowledge and regard the miners of a section of Colorado had for him, after he had

made a visit there. He was a thorough student, a true friend, and altogether one of the best men he ever knew.

The preamble and resolutions as prepared by Judge Dana, were then adopted by a unanimous vote, after which the meeting adjourned until 2:45, to attend the funeral.

OSTERHOUT FREE LIBRARY.

[At a meeting of the Trustees of the Osterhout Free Library, the following minute was read and ordered spread upon the records:]

Resolved, That by the death of our fellow trustee, Harrison Wright, we have been deprived not only of our most efficient member, but of an esteemed and valued friend. As well by natural aptitude as by thorough accomplishment he was singularly adapted to render good service to our joint work. Reading with equal facility the German and French languages, his knowledge of literatures was not bounded by that of his own tongue. Intimately acquainted with modern scientific thought and discovery, he was thoroughly able to distinguish between that form of scientific thought which, being confined to its legitimate bounds, is true and leads to truth, and that which, overleaping these bounds, is false and leads to error. An enthusiastic lover of books, his knowledge of them was most extensive and marked by a discriminating taste. Thus trained and equipped in the very prime of life and flower of his manhood, and

with the promise of many years of useful life before him, it is surely not extravagant to say of him in relation to the work in which we were joined:

“He was a man, take him for all in all,
We shall not look upon his like again.”

HISTORICAL SOCIETY OF PENNSYLVANIA.

[At a meeting of the Historical Society of Pennsylvania, held March 9th, 1885, Mr. Frederick D. Stone, the Librarian, said:]

The duty has been assigned to me of announcing to this society the death of Dr. Harrison Wright, the secretary of the Wyoming Historical and Geological Society; he died at Wilkes-Barré, on the 20th of February last, in the 35th year of his age.

To many of you present he was probably unknown, but between him and those actively engaged in the direction of our affairs, the most cordial relations existed. The feeling of respect which a personal acquaintance with him at first inspired, ripened into one of high esteem, as his scholarly attainments became known, and in his death we cannot but feel that the community at large have met with a loss as great as the inexpressible grief which has befallen his friends.

He was born at Wilkes-Barré, July 15th, 1850. Through his father, Harrison Wright, he was descended from Quaker ancestors, who settled in Burlington county, New Jersey, in 1681. From his mother he inherited the blood of some of our oldest

German settlers. In 1795, his great grandfather, Caleb Wright, emigrated to the valley of the North Branch of the Susquehanna, and in that section of our State his descendants have ever held prominent and influential rank.

Succeeding to an ample estate, it would not have been surprising had Dr. Wright availed himself of the privilege to which his social position entitled him, and contented himself with the respect which his gentlemanly bearing would have commanded in any community. He was, however, imbued with higher aims. He early manifested a love for learning and pursued his studies with a perseverance characteristic of the two races from which he had sprung. He graduated with high honors at Heidelberg, Germany, from which university he received the degree of Doctor of Philosophy.

Returning to America, he studied law, and was admitted to the bar in 1874. The knowledge thus gained, fitted him for some of the responsibilities afterwards imposed upon him, but the practice of the profession was distasteful to him and he turned from it and the political preferment which his friends urged him to accept, to other pursuits in which he had become interested. He was an accomplished linguist, an expert geologist and metallurgist, and an archæologist of great promise.

He devoted his time principally to the interests of the Wyoming Historical and Geological Society, and was elected its secretary, and personally labored in the arrangement of its collections. His frank and open manners made him a favorite with old and young, and for several years he conducted an Agassiz club of children, which had been formed in Wilkes-Barré.

His scientific pursuits were not allowed to engage his entire time. From his youth he had been an antiquarian, and historical matters always interested him. His late pamphlet on the Ashburnham MSS. attracted attention on both sides of the Atlantic. His working abilities were of the highest order. He possessed a retentive memory and untiring energy. So general was his information that no one could talk long with him without perceiving that he was a hard student. He made no ostentatious display of learning, but when a subject with which he was familiar was the topic, his thoroughness became soon apparent. His opinions were expressed with a clearness and confidence which impressed the listener with the attention he had given the matter.

Dr. Wright was a member of a number of scientific societies here and abroad. He was also a trustee of the Osterhout Free Library, and had he been spared, his experience would have aided greatly in carrying out the object of that trust.

To what heights of usefulness such a man might have attained, had he lived to a ripe age, we can but speculate. His promises were great and his services in mature years would no doubt have been all that his friends fondly expected of him. But as I understand his character, however brilliant his scientific and literary reputation might have grown, it would have given additional prominence to one feature which his career, blighted as it was by early death, still presents, and from which we may profit. I mean the example it affords to the young men of wealth and position in this country. His life should show them what opportunities for reputations and usefulness are open to those who have the means of making themselves thoroughly trained students, and who will follow unselfishly some of the higher branches of scientific or literary investigation.

Unfortunately, there are but few who choose such a course, and when one who has brought to it talents of a superior order, is stricken down on the threshold, the loss is far more than a grief to his friends and a bereavement to his family.

I therefore, Mr. President, ask that a minute, expressive of the regret with which we have heard of the death of Dr. Wright, be entered upon our records, and a copy of it be sent to the Wyoming Historical and Geological Society.

Upon motion of Dr. James J. Levick, it was
Resolved, That the remarks of Mr. Stone be entered
upon the records of the society, in place of the
minute he had suggested, and that a copy of them be
forwarded to the Wyoming Historical and Geological
Society, as expressing the respect entertained for
Dr. Wright by this society, and of the regret with
which it has heard of his death.

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